

EXHIBIT 4

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Huawei Technologies America, Inc. (“Huawei”) infringes the Patents-in-Suit by the “Huawei-Google Calling System.” The Huawei-Google Calling System includes desktop computers, laptops, tablets, smartphones, and other mobile devices as well as enterprise to small office-home office level telephony hardware, software, and cloud-based services manufactured and supported by Huawei and used by Google LLC (“Google”). The Huawei-Google Calling System actively encourages and enables users of Huawei devices to participate in mobile telephone roaming as described in the ‘721 Patent and set forth in the asserted claims.

In the Huawei-Google Calling System, for example, users of Huawei smartphones and other mobile devices are encouraged and enabled to send messages including text, images, video and audio to others using Huawei hardware, firmware, configuration data, and/or Voice over WiFi (VoWiFi) software applications developed by Huawei for supported Huawei devices to communicate with Google-Fi owned and operated by Google LLC (hereinafter “Google”). Huawei has actively encouraged and enabled users of Huawei smartphones and other mobile devices having Huawei hardware, firmware, configuration data, and/or VoWiFi client software applications to use Google-Fi to make VoWiFi calls, for example, to use VoWiFi on Google-Fi as a voice and/or video calling feature incorporating techniques described in the ‘721 Patent. Additionally, Huawei actively encouraged and enabled Google to use one or more communication networks, one or more servers, one or more services, and/or one or more other resources associated with a Google VoWiFi server infrastructure and running one or more Google VoWiFi server software applications to implement setup, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and/or video calls) communication to and from the supported Huawei devices using the Huawei hardware, firmware, configuration data, and/or VoWiFi client software applications. Huawei has actively encouraged and enabled Google to use the Google VoWiFi server software applications running on servers owned and operated by Google to enable VoWiFi for Huawei devices with a voice and/or video calling feature incorporating techniques described in the ‘721 Patent.

Moreover, in the Huawei-Google Calling System, for example, users of Huawei smartphones and other mobile devices are encouraged and enabled to send messages including text, images, video and audio to others using one or more Google Internet-based calling client software applications (e.g., Google Voice/Hangouts/Duo) developed by Google for supported Huawei devices. Huawei has actively encouraged and enabled users of Huawei smartphones and other mobile devices having the Google Internet-based calling client applications to use Google to make Internet-based calls and, for example, use voice over IP (VoIP), session initiation protocol (SIP), and/or other real-time communication protocols as a voice and/or video calling feature incorporating techniques described in the ‘721 Patent. Additionally, Huawei has actively encouraged and enabled Google to use one or more communication networks, one or more servers, one or more services, and/or one or more other resources associated with a Google

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Internet-based calling server infrastructure running one or more Google Internet-based calling server software applications to implement setup, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and/or video calls) communication to and from the supported Huawei devices using the Google Internet-based calling client software applications. Huawei has actively encouraged and enabled Google to use the Google Internet-based calling server software applications running on servers owned and operated by Google to enable Internet-based calling for Huawei devices with a voice and/or video calling feature incorporating techniques described in the ‘721 Patent.

Chart A applies independent claim 51 of the ‘721 Patent to the Huawei-Google Calling System.

Chart A demonstrates that in the Huawei-Google Calling System, Huawei actively encourages and enables Huawei devices and Google to produce an access code based on a location identifier identifying a geographical location of the wireless device and which is used by a wireless device to establish communications with a destination node as described in the ‘721 Patent and defined in the asserted claims, literally and/or under the doctrine of equivalents. In the Huawei-Google Calling System, for example, Huawei actively encourages and enables Huawei devices and Google to produce an access code comprising one or more portions and/or a combination of information, for example, an access code comprising information identifying one or more Internet Protocol (IP) network addresses associated with one or more calling servers and/or call session information obtained from one or more calling servers. Either individually or in combination with other information, the call session information, for example, identifies a communications channel on a gateway (e.g., one or more calling servers) through which communications between the wireless device and the destination node can be conducted. Thus, Huawei has actively encouraged and enabled Huawei devices and Google to enable communications from the wireless device to the destination node to be initiated using the access code as described in the ‘721 Patent and defined in the asserted claims, literally and/or under the doctrine of equivalents.

Chart A uses one scenario of infringement as an example to demonstrate how elements of the asserted claims read on the use of a domain name system (DNS) associated with the Huawei-Google Calling System to produce one or more portions and/or combinations of information representing an access code that is based on a location identifier identifying a geographical location of a wireless apparatus and that identifies one or more Internet Protocol (IP) network addresses associated with one or more calling servers and/or call session information obtained via the one or more calling servers to enable mobile telephone roaming as described in the ‘721 Patent and defined in the asserted claims, literally and/or under the doctrine of equivalents. The scenario set forth in **Chart A** using DNS is one example made without limitation to one or more additional scenarios of

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infringement, which may be described in other charts using at least some of the components and/or processes associated with the Huawei-Google Calling System already identified in **Chart A**, further demonstrating how the asserted claims read, literally and/or under the doctrine of equivalents, on the Huawei-Google Calling System.

CHART A**U.S. Patent No. 10,880,721**

51.	<p>[51p] A method for enabling a wireless device to establish communications with a destination node, the method comprising:</p>	<p>The Huawei-Google Calling System performs a method for enabling a wireless device to establish communications with a destination node.</p> <p>In the Huawei-Google Calling System, for example, establishing communications between a wireless device (e.g., a caller's mobile telephone) and a destination node of a communications network (e.g., a callee's mobile telephone) is performed when the Google server infrastructure owned and/or operated by Google produces an access code based on a geographic location associated with the wireless device, and wherein the access code is used by the wireless device to initiate communications from the wireless device to the destination node as described in the '721 Patent and defined in claim 51, literally and/or under the doctrine of equivalents. In the Huawei-Google Calling System, an example of the caller's mobile telephone includes a Huawei device configured with:</p> <ul style="list-style-type: none"> • The Huawei hardware, firmware, configuration data, and/or VoWiFi software applications to communicate with the Google VoWiFi server infrastructure running one or more of the Google VoWiFi calling server software applications associated with Google-Fi; and/or • One or more of the Google Internet-based calling client software applications to communicate with the Google Internet-based calling server infrastructure running one or more of the Google Internet-based calling server software applications associated with the Google Internet-based calling products. <p>In the Huawei-Google Calling System, for example, the caller's mobile telephone communicates with the Google server infrastructure (whether the Google-Fi VoWiFi server infrastructure or the Google Internet-based calling server infrastructure), an example of which includes:</p> <ul style="list-style-type: none"> • One or more domain name system (DNS) servers associated with the Google server infrastructure. The DNS servers provide a naming system for one or more communication networks, one or more
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		<p>servers, one or more services, and/or other resources associated with the Google server infrastructure. The DNS servers include one or more parts and/or portions of the Google server software applications (whether the Google VoWiFi server software and/or the Google Internet-based calling server software applications) developed and/or operated by Google to implement setup, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported Huawei devices. The DNS servers associate domain names used by the Huawei devices with various information (such as IP network addresses) that provide access to the communication networks, servers, services, and/or other resources associated with the Google server infrastructure.</p> <ul style="list-style-type: none"> • One or more calling servers associated with the Google server infrastructure. The calling servers provide setup, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported Huawei devices (whether using the Huawei hardware, firmware, configuration data, and/or VoWiFi software applications and/or the Google Internet-based calling client software applications). The calling servers include one or more parts and/or portions of the Google server software applications developed and/or operated by Google to provide access for the Huawei devices to exchange messages (including chats, group chats, images, videos, voice messages and files) and make calls (voice and video) around the world. <p>In the Huawei-Google Calling System, for example, roaming with a mobile telephone is performed when Huawei actively encourages and enables the caller's mobile telephone and the Google server infrastructures to communicate to produce an access code based on a geographic location associated with the wireless device, wherein the access code is used by the wireless device to initiate communications from the wireless device to the destination node as described in the '721 Patent and defined in claim 51, literally and/or under the doctrine of equivalents. In the Huawei-Google Calling System, for example, the caller's mobile telephone initiates a call (whether a VoWiFi call using the Huawei hardware, firmware, configuration data, and/or</p>
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		VoWiFi software application and/or an Internet-based call using the Google Internet-based calling client software applications). The caller's mobile telephone establishes communication with the Google server infrastructure, which carries the call to one or more devices and/or destinations (e.g., a callee's mobile telephone). Huawei actively encourages and enables roaming with a mobile telephone using Huawei devices and Google to make VoWiFi and/or Internet-based calls as described in the '721 Patent and defined in claim 51, literally and/or under the doctrine of equivalents.
	[51a-1] receiving from the wireless device an access code request message	<p>The Huawei-Google Calling System receives from the wireless device an access code request message. In the Huawei-Google Calling System, for example, the Google server infrastructure performs this element using the Google VoWiFi and/or Internet-based call server software applications to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Google VoWiFi and/or Internet-based calling client software applications.</p> <p>In the Huawei-Google Calling System, for example, the caller's mobile telephone uses the Google client software application to communicate (or cause to be communicated) one or more parts, portions, and/or combinations of information associated with an access code request message, and the Google server infrastructure uses the Google server software application to obtain (or cause to be obtained) one or more parts, portions, and/or combinations of information associated with the access code request message. For example, the Google server infrastructure uses the Google server software application to obtain (or cause to be obtained) information associated with the access code request from one or more access servers associated with the Google server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Google server infrastructure uses the Google server software application to obtain (or cause to be obtained) the communications and/or

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	<p>combination of communications associated with the callee's mobile telephone with one or more of the DNS servers. In the Huawei-Google Calling System, for example, the DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call. In the Huawei-Google Calling System, for example, the information requesting the DNS servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone with the DNS servers comprise one or more DNS queries that query the DNS servers for one or more IP network addresses associated with one or more of the calling servers. In the Huawei-Google Calling System, for example, the Google server infrastructure obtains at least one DNS query asking the DNS servers for the IP network addresses associated with the calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei-Google Calling System, for example, the Google server infrastructure obtains at least one DNS query using one or more domain names associated with the Google server infrastructure to obtain the IP network addresses associated with the geographically situated calling servers. One or more domain names and one or more blocks of IP network addresses owned by Google and used by the Google client software application In the Huawei-Google Calling System, for example to obtain the IP network addresses associated with the geographically situated calling servers, are set forth in Appendix A. Additionally, Appendix A sets forth that one or more</p>
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		<p>communications to the DNS servers using the domain names owned by Google, for example based on the location associated with the communications, results in obtaining one or more IP network addresses associated with the blocks of IP network addresses owned by Google and geographically situated calling servers associated with the Google server infrastructure.</p> <ul style="list-style-type: none">• In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Google server infrastructure uses the Google server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone with one or more of the calling servers. In the Huawei-Google Calling System, for example, the calling servers provide access to the Google server software applications developed by Google to exchange messages (including chats, group chats, images, videos, voice messages and files) and make VoWiFi and/or Internet-based calls (voice and video). In the Huawei-Google Calling System, for example, the calling servers obtain the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the calling servers to provide access to exchange a message or setup and initiate a VoWiFi and/or Internet-based call. In the Huawei-Google Calling System, for example, the information requesting the calling servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone with the calling servers comprise information asking one or more geographically situated calling servers for call session information. In the Huawei-Google Calling System, for example, the caller's mobile telephone and the geographically situated calling servers communicate to establish the call session information to select and connect to a calling gateway, establish signaling, establish a media port and provide connectivity negotiation with calling gateway and/or peer-to-peer using protocols such as ICE/STUN/TURN, and
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		<p>initiate via the calling gateway a VoWiFi and/or Internet-based call, a VoWiFi and/or Internet-based group/conference call, and/or a PSTN call with the destination node identified by the destination node identifier. See https://support.google.com/fi/answer/6157793?hl=en (“Make calls over Wi-Fi”).</p> <p>Individually or in combination with other information, the Google server infrastructure using the Google server software application to obtain the information requesting the DNS servers and/or the calling servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call, which are examples of receiving from the wireless device an access code request message as set forth in this element.</p>
	<p>[51a-2] including a destination node identifier associated with the destination node and</p>	<p>The Huawei-Google Calling System receives from the wireless device an access code request message, where the access code request message includes a destination node identifier associated with the destination node. In the Huawei-Google Calling System, for example, the Google server infrastructure performs this element using the Google VoWiFi and/or Internet-based call server software applications to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Google VoWiFi and/or Internet-based calling client software applications.</p> <p>In the Huawei-Google Calling System, for example, the caller’s mobile telephone uses the Google client software application to communicate (or cause to be communicated) an access code request message comprising one or more parts, portions, and/or combinations of information. In the Huawei-Google Calling System, for example, composing a message or initiating a VoWiFi and/or Internet-based call using the Google client software application begins with a user entering or selecting a destination node identifier associated with a destination node with which the user wishes to communicate. In the Huawei-Google</p>

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	<p>Calling System, for example, the user input, which may comprise a partial or complete name, email address, telephone number, or device identifier, is input directly and/or indirectly into a contact list search box, on a touch screen displaying contacts to obtain the destination node identifier, and/or via voice command. In the Huawei-Google Calling System, for example, the user input associated with the caller's mobile telephone comprises one or more of user name, email addresses, device identifiers, and/or telephone numbers associated with the destination node which the user wishes to communicate. For example, the caller's mobile telephone uses the Google client software application to obtain the email addresses, device identifiers, and/or telephone numbers associated with the destination node with which the user wishes to communicate from the user input associated with the caller's mobile telephone. Alternatively or in addition, the callee identifier could be a user name associated with the destination node.</p> <p>In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to receive (or cause to be received) the parts, portions, and/or combinations of information associated with the access code request message as set forth in element [51a-1]. In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to obtain (or cause to be obtained) the parts, portions, and/or combinations of information associated with the access code request message using the communications and/or combination of communications associated with the callee's mobile telephone with one or more access servers and/or a combination of access servers associated with the Google server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Google server infrastructure uses the Google server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone with one or more of the DNS servers. In the Huawei-Google Calling System, for example, the DNS servers provide access to
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		<p>the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call. In the Huawei-Google Calling System, for example, the information requesting the DNS servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone with the DNS servers comprise one or more DNS queries that query the DNS servers for one or more IP network addresses associated with one or more of the calling servers. In the Huawei-Google Calling System, for example, the Google server infrastructure obtains at least one DNS query asking the DNS servers for the IP network addresses associated with the calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei-Google Calling System, for example, the Google server infrastructure obtains at least one DNS query using one or more domain names associated with the Google server infrastructure to obtain the IP network addresses associated with the geographically situated calling servers. In the Huawei-Google Calling System, for example, the DNS query includes a destination node identifier associated with the destination and used by the DNS servers to obtain the IP network addresses associated with the geographically situated calling servers.</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Google server infrastructure uses the Google server software application to obtain (or cause to be obtained) the communications and/or
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combination of communications associated with the callee's mobile telephone with one or more of the calling servers. In the Huawei-Google Calling System, for example, the calling servers provide access to the Google server software applications developed by Google to exchange messages (including chats, group chats, images, videos, voice messages and files) and make VoWiFi and/or Internet-based calls (voice and video). In the Huawei-Google Calling System, for example, the calling servers obtain the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the calling servers to provide access to exchange a message or setup and initiate a VoWiFi and/or Internet-based call. In the Huawei-Google Calling System, for example, the information requesting the calling servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone with the calling servers comprise information asking one or more geographically situated calling servers for call session information. In the Huawei-Google Calling System, for example, information asking one or more geographically situated calling servers for call session information includes a destination node identifier associated with the destination node. In the Huawei-Google Calling System, for example, the caller's mobile telephone and the geographically situated calling servers communicate to establish the call session information using the destination node identifier associated with the destination node.

Individually or in combination with other information, the Google server infrastructure using the Google server software application to obtain the information requesting the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call and/or the information requesting the calling servers to provide access to exchange a message or setup and initiate a

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		VoWiFi and/or Internet-based call, are examples of receiving from the mobile telephone an access code request message including a destination node identifier associated with the destination node as set forth in this element.
	[51a-3] a location identifier identifying a geographical location of the wireless device;	<p>The Huawei-Google Calling System receives from the wireless device an access code request message, where the access code request message includes a location identifier identifying a geographical location of the wireless device. In the Huawei-Google Calling System, for example, the Google server infrastructure performs this element while using the Google VoWiFi and/or Internet-based call server software applications to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Google VoWiFi and/or Internet-based calling client software applications.</p> <p>In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to receive (or cause to be received) the parts, portions, and/or combinations of information associated with the access code request message as set forth in element [51a-1]. In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to obtain (or cause to be obtained) the parts, portions, and/or combinations of information associated with the access code request message using the communications and/or combination of communications associated with the callee's mobile telephone with one or more access servers and/or a combination of access servers associated with the Google server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Google server infrastructure uses the Google server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone with one or more of the

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DNS servers. In the Huawei-Google Calling System, for example, the DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call. In the Huawei-Google Calling System, for example, the information requesting the DNS servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone with the DNS servers comprise one or more DNS queries that query the DNS servers for one or more IP network addresses associated with one or more of the calling servers. In the Huawei-Google Calling System, for example, the Google server infrastructure obtains at least one DNS query asking the DNS servers for the IP network addresses associated with the calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei-Google Calling System, for example, the Google server infrastructure obtains at least one DNS query using one or more domain names associated with the Google server infrastructure to obtain the IP network addresses associated with the geographically situated calling servers. The DNS servers use the one or more IP network addresses directly and/or indirectly associated with the caller's mobile telephone as a location identifier identifying a geographical location of the wireless apparatus.

- In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Google server infrastructure uses the

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	<p>Google server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone with one or more of the calling servers. In the Huawei-Google Calling System, for example, the calling servers provide access to the Google server software applications developed by Google to exchange messages (including chats, group chats, images, videos, voice messages and files) and make VoWiFi and/or Internet-based calls (voice and video). For example, the calling servers obtain the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the calling servers to provide access to exchange a message or setup and initiate a VoWiFi and/or Internet-based call. For example, the information requesting the calling servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. For example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone with the calling servers comprise information asking one or more geographically situated calling servers for call session information. For example, the caller's mobile telephone and the geographically situated calling servers communicate to establish the call session information using the location identifier identifying a geographical location of the wireless device. The calling servers use the one or more IP network addresses directly and/or indirectly associated with the caller's mobile telephone and/or a current or pre-associated location information associated with the caller's mobile telephone as a location identifier identifying a geographical location of the wireless apparatus.</p> <p>The IP network addresses directly and/or indirectly associated with the caller's mobile telephone identify a location associated with the caller's mobile telephone, for example, as one or more absolute and relative locations:</p>
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	<ul style="list-style-type: none">• an actual geographic location associated with the caller's mobile telephone, which is identified by an IP network address assigned to the caller's mobile telephone by a service provider, such as a wireless carrier or Internet Service Provider (ISP);• an actual geographic location associated with the caller's mobile telephone, which is identified by an IP network address assigned to a router by a service provider, such as a wireless carrier or ISP, and through which the caller's mobile telephone directly or indirectly communicates with the Google server infrastructure;• an actual geographic location associated with the caller's mobile telephone, which is identified by an IP network address assigned to a proxy server by a service provider independent of the Google server infrastructure, such as a wireless carrier or ISP, and which is physically located at an office/data center owned or leased by the service provider or a customer of the service provider and through which the caller's mobile telephone directly or indirectly communicates with the Google server infrastructure;• a relative geographic location associated with the caller's mobile telephone, which is identified using a location physically or logically relative to the Google server infrastructure by an IP network address assigned by a service provider independent of the Google server infrastructure to the caller's mobile telephone, a router through which the caller's mobile telephone communicates with the Google server infrastructure, or a proxy server through which the caller's mobile telephone communicates with the Google server infrastructure;• a proximate location associated with the caller's mobile telephone, which is identified using a location physically or logically approximate to the Google server infrastructure by an IP network address assigned by a service provider independent of the Google server infrastructure to the caller's mobile telephone, a router through which the caller's mobile telephone communicates with the Google server
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		<p>infrastructure, or a proxy server through which the caller's mobile telephone communicates with the Google server infrastructure.</p> <p>The current or pre-associated location information associated with the caller's mobile telephone identify a location associated with the caller's mobile telephone, such as one or more absolute and relative locations as:</p> <ul style="list-style-type: none"> • a physical location, such as a street address, latitude/longitude, and GPS coordinates. • a logical or virtual location, such as a communications network, Internet Service Provider, Wireless Service Provider, and Wireless Carrier. <p>Individually or in combination with other information, the Google server infrastructure using the Google server software application to obtain the information requesting the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call and/or the information requesting the calling servers to provide access to exchange a message or setup and initiate a VoWiFi and/or Internet-based call, are examples of receiving from the mobile telephone an access code request message including a location identifier identifying a geographical location of the wireless device as set forth in this element.</p>
	[51b-1] in response to receiving the access code request message, causing a routing controller to produce an access code identifying a communications channel on a gateway through which	<p>The Huawei-Google Calling System, in response to receiving the access code request message, causes a routing controller to produce an access code identifying a communications channel on a gateway through which communications between the wireless device and the destination node can be conducted. In the Huawei-Google Calling System, for example, the Google server infrastructure performs this element using the Google VoWiFi and/or Internet-based call server software applications to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Google VoWiFi and/or Internet-based calling client software applications.</p>

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<p>communications between the wireless device and the destination node can be conducted,</p>	<p>In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to obtain (or cause to be obtained) an access code request message as set forth in element [51a et seq]. In response to the access code request message, for example, in the Huawei-Google Calling System, the Google server infrastructure produces an access code reply message using the parts, portions, and/or combinations of information associated with the access code request message communicated from (or caused to be communicate by) the callee's mobile telephone. The Google server infrastructure uses the Google server software application to produce (or cause to be produced) one or more parts, portions, and/or combinations of information associated with the access code reply message, such as an access code. In the Huawei-Google Calling System, for example, the access code includes one or more parts, portions, and/or combinations of information. In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to produce (or cause to be produced) the parts, portions, and/or combinations of information associated with the access code reply message (and the access code) using one or more access servers and/or a combination of access servers associated with the Google server infrastructure:</p> <ul style="list-style-type: none"> • In one or more operations associated with causing a routing controller to produce an access code, the Google server infrastructure uses the Google server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the DNS servers. In the Huawei-Google Calling System, for example, the DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers produce (or cause to be produced) information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to
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exchange a message or setup and initiate a VoWiFi and/or Internet-based call. In the Huawei-Google Calling System, for example, the information produced by the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the DNS servers. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei-Google Calling System, for example, the DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated calling servers using one or more domain names associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated calling servers). The DNS servers, for example, identify the geographically situated calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the DNS servers, for example, identify the geographically situated calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated calling servers).

- In one or more operations associated with causing a routing controller to produce an access code, the Google server infrastructure uses the Google server software application to produce (or cause to be

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		<p>produced) one or more communications and/or a combination of communications associated with one or more of the geographically situated calling servers identified by the DNS servers. In the Huawei-Google Calling System, for example, the calling servers provide access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make VoWiFi and/or Internet-based calls (voice and video). In the Huawei-Google Calling System, for example, the calling servers produce (or caused to be produced) call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make VoWiFi and/or Internet-based calls. In the Huawei-Google Calling System, for example, the call session information produced by the calling servers to provide access to exchange messages and make VoWiFi and/or Internet-based calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the calling servers. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the calling servers include call session information associated with the calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei-Google Calling System, the call session information associated with the calling servers includes the IP network addresses associated with the geographically situated calling servers. In the Huawei-Google Calling System, for example, the geographically situated calling servers produce the call session information to identify, to the caller's mobile telephone, the calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated calling servers. In the Huawei-Google Calling System, for example, the geographically situated calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei-Google Calling System, for example, the geographically situated calling servers, additionally, produce the call session information to identify,</p>
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		<p>to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.</p> <p>Individually or in combination with other information, the Google server infrastructure using the Google server software application to produce the information produced by with the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call and/or the call session information produced by the calling servers to provide access to exchange a message or setup and initiate a VoWiFi and/or Internet-based call, are examples of causing a routing controller to produce an access code identifying a communications channel on a gateway through which communications between the wireless device and the destination node can be conducted as set forth in this element.</p>
	<p>[51b-2] the access code being based on the location identifier of the access code request message received from the wireless device,</p>	<p>The Huawei-Google Calling System, in response to receiving the access code request message, causes a routing controller to produce an access code being based on the location identifier of the access code request message received from the wireless device. In the Huawei-Google Calling System, for example, the Google server infrastructure performs this element using the Google VoWiFi and/or Internet-based call server software applications to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Google VoWiFi and/or Internet-based calling client software applications.</p> <p>In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to produce (or cause to be produced) one or more parts, portions, and/or combinations of information associated with the access code reply message, such as an access code as set forth in element [51b-1]. In the Huawei-Google Calling System, for example, the Google server infrastructure uses the</p>

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		<p>Google server software application to produce (or cause to be produced) the parts, portions, and/or combinations of information associated with the access code reply message (and the access code) using one or more access servers associated with the Google server infrastructure:</p> <ul style="list-style-type: none"> • In one or more operations associated with causing a routing controller to produce an access code, the Google server infrastructure uses the Google server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the DNS servers. In the Huawei-Google Calling System, for example, the DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers produce (or cause to be produced) information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call. In the Huawei-Google Calling System, for example, the information produced by the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the DNS servers. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei-Google Calling System, for example, the DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated calling servers using one or more domain names associated with the Google server infrastructure. In the Huawei-Google
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		<p>Calling System, for example, the DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated calling servers). The DNS servers, for example, identify the geographically situated calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the DNS servers, for example, identify the geographically situated calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated calling servers).</p> <ul style="list-style-type: none"> • In one or more operations associated with causing a routing controller to produce an access code, the Google server infrastructure uses the Google server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the geographically situated calling servers identified by the DNS servers. In the Huawei-Google Calling System, for example, the calling servers provide access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make VoWiFi and/or Internet-based calls (voice and video). In the Huawei-Google Calling System, for example, the calling servers produce (or caused to be produced) call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make VoWiFi and/or Internet-based calls. In the Huawei-Google Calling System, for example, the call session information produced by the calling servers to provide access to exchange messages and make VoWiFi and/or Internet-based calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the calling servers. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the calling
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servers include call session information associated with the calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei-Google Calling System, the call session information associated with the calling servers includes the IP network addresses associated with the geographically situated calling servers. In the Huawei-Google Calling System, for example, the geographically situated calling servers produce the call session information to identify, to the caller's mobile telephone, the calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated calling servers. In the Huawei-Google Calling System, for example, the geographically situated calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei-Google Calling System, for example, the geographically situated calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.

Individually or in combination with other information, the Google server infrastructure using the Google server software application to produce the information produced by with the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call and/or the call session information produced by the calling servers to provide access to exchange a message or setup and initiate a VoWiFi and/or Internet-based call, are examples of causing a routing controller to produce an access code being based on the location identifier of the access code request message received from the wireless device as set forth in this element.

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<p>[51b-3] wherein the access code is useable by the wireless device to initiate communications with the destination node through the communications channel; and</p>	<p>The Huawei-Google Calling System, in response to receiving the access code request message, causes a routing controller to produce an access code, wherein the access code is useable by the wireless device to initiate communications with the destination node through the communications channel. In the Huawei-Google Calling System, for example, the Google server infrastructure performs this element using the Google VoWiFi and/or Internet-based call server software applications to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Google VoWiFi and/or Internet-based calling client software applications.</p> <p>In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to produce (or cause to be produced) one or more parts, portions, and/or combinations of information associated with the access code reply message, such as an access code as set forth in element [51b-1]. In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to produce (or cause to be produced) the parts, portions, and/or combinations of information associated with the access code reply message (and the access code) using one or more access servers associated with the Google server infrastructure:</p> <ul style="list-style-type: none"> • In one or more operations associated with causing a routing controller to produce an access code, the Google server infrastructure uses the Google server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the DNS servers. In the Huawei-Google Calling System, for example, the DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers produce (or cause to be produced) information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to
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exchange a message or setup and initiate a VoWiFi and/or Internet-based call. In the Huawei-Google Calling System, for example, the information produced by the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the DNS servers. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei-Google Calling System, for example, the DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated calling servers using one or more domain names associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated calling servers). The DNS servers, for example, identify the geographically situated calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the DNS servers, for example, identify the geographically situated calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated calling servers).

- In one or more operations associated with causing a routing controller to produce an access code, the Google server infrastructure uses the Google server software application to produce (or cause to be

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		<p>produced) one or more communications and/or a combination of communications associated with one or more of the geographically situated calling servers identified by the DNS servers. In the Huawei-Google Calling System, for example, the calling servers provide access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make VoWiFi and/or Internet-based calls (voice and video). In the Huawei-Google Calling System, for example, the calling servers produce (or caused to be produced) call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make VoWiFi and/or Internet-based calls. In the Huawei-Google Calling System, for example, the call session information produced by the calling servers to provide access to exchange messages and make VoWiFi and/or Internet-based calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the calling servers. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the calling servers include call session information associated with the calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei-Google Calling System, the call session information associated with the calling servers includes the IP network addresses associated with the geographically situated calling servers. In the Huawei-Google Calling System, for example, the geographically situated calling servers produce the call session information to identify, to the caller's mobile telephone, the calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated calling servers. In the Huawei-Google Calling System, for example, the geographically situated calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei-Google Calling System, for example, the geographically situated calling servers, additionally, produce the call session information to identify,</p>
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		<p>to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.</p> <p>Individually or in combination with other information, the Google server infrastructure using the Google server software application to produce the information produced by with the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call and/or the call session information produced by the calling servers to provide access to exchange a message or setup and initiate a VoWiFi and/or Internet-based call, are examples of causing a routing controller to produce an access code is useable by the wireless device to initiate communications with the destination node through the communications channel as set forth in this element.</p>
	[51c-1] transmitting, to the wireless device, an access code reply message	<p>The Huawei-Google Calling System transmits, to the wireless device, an access code reply message. In the Huawei-Google Calling System, for example, the Google server infrastructure performs this element using the Google VoWiFi and/or Internet-based call server software applications to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Google VoWiFi and/or Internet-based calling client software applications.</p> <p>In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to obtain (or cause to be obtained) the access code request message associated with the caller's mobile telephone as set forth in elements [51a et seq]. In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to produce (or cause to be produced) the access code as set forth in elements [51b et seq]. In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to communicate (or</p>

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		<p>cause to be communicated) to the caller's mobile telephone one or more parts, portions, and/or combinations of information associated with an access code reply message. In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to communicate (or cause to be communicated) the parts, portions, and/or combinations of information associated with the access code reply message using one or more direct and/or indirect communications and/or combination of communications to the caller's mobile telephone. In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to communicate (or cause to be communicated) the parts, portions, and/or combinations of information associated with an access code reply message using one or more direct and/or indirect communications and/or combination of communications associated with one or more access servers and/or a combination of access servers associated with the Google server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Google server infrastructure uses the Google server software application to communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the DNS servers. In the Huawei-Google Calling System, for example, the DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers communicate information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call. In the Huawei-Google Calling System, for example, the information produced by the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure includes and/or is communicated using one
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or more packets produced (or caused to be produced) by the DNS servers. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei-Google Calling System, for example, the DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated calling servers using one or more domain names associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated calling servers). The DNS servers, for example, identify the geographically situated calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the DNS servers, for example, identify the geographically situated calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated calling servers).

- In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Google server infrastructure uses the Google server software application to communicate (or cause to be communicated) communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the calling servers. In the Huawei-Google Calling System, for example, the calling servers provides access to exchange messages (including chats, group chats, images, videos, voice messages

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		<p>and files) and make VoWiFi and/or Internet-based calls (voice and video). In the Huawei-Google Calling System, for example, the calling servers communicate call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make VoWiFi and/or Internet-based calls. In the Huawei-Google Calling System, for example, the call session information produced by the calling servers to provide access to exchange messages and make VoWiFi and/or Internet-based calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the calling servers. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the calling servers include call session information associated with the calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei-Google Calling System, the call session information associated with the calling servers includes the IP network addresses associated with the geographically situated calling servers. In the Huawei-Google Calling System, for example, the geographically situated calling servers produce the call session information to identify, to the caller's mobile telephone, the calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated calling servers. In the Huawei-Google Calling System, for example, the geographically situated calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei-Google Calling System, for example, the geographically situated calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.</p>
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		<p>Individually or in combination with other information, the Google server infrastructure using the Google server software application to communicate the information produced by the DNS servers (e.g., the IP address(es) of the calling servers) and/or call session information produced by the calling servers, to the wireless device to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call, are examples of transmitting an access code reply message as set forth in this element.</p>
	[51c-2] including the access code based on the location identifier,	<p>The Huawei-Google Calling System transmits, to the wireless device, an access code reply message, where the access code reply message includes the access code based on the location identifier. In the Huawei-Google Calling System, for example, the Google server infrastructure performs this element using the Google VoWiFi and/or Internet-based call server software applications to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Google VoWiFi and/or Internet-based calling client software applications.</p> <p>In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to communicate (or cause to be communicated) the access code reply message as set forth in element [51c-1]. In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to communicate (or cause to be communicated) the parts, portions, and/or combinations of information associated with an access code reply message using one or more direct and/or indirect communications and/or combination of communications associated with one or more access servers and/or a combination of access servers associated with the Google server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Google server infrastructure uses the Google server software

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	<p>application to communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the DNS servers. In the Huawei-Google Calling System, for example, the DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers communicate information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call. In the Huawei-Google Calling System, for example, the information produced by the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the DNS servers. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei-Google Calling System, for example, the DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated calling servers using one or more domain names associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated calling servers). The DNS servers, for example, identify the geographically situated calling servers to the caller's mobile telephone based on the</p>
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		<p>geographic location associated with the caller's mobile telephone. Additionally, the DNS servers, for example, identify the geographically situated calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated calling servers).</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Google server infrastructure uses the Google server software application to communicate (or cause to be communicated) communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the calling servers. In the Huawei-Google Calling System, for example, the calling servers provides access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make VoWiFi and/or Internet-based calls (voice and video). In the Huawei-Google Calling System, for example, the calling servers communicate call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make VoWiFi and/or Internet-based calls. In the Huawei-Google Calling System, for example, the call session information produced by the calling servers to provide access to exchange messages and make VoWiFi and/or Internet-based calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the calling servers. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the calling servers include call session information associated with the calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei-Google Calling System, the call session information associated with the calling servers includes the IP network addresses associated with the geographically situated calling servers. In the Huawei-Google Calling System, for example, the geographically situated calling servers produce the call session
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		<p>information to identify, to the caller's mobile telephone, the calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated calling servers. In the Huawei-Google Calling System, for example, the geographically situated calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei-Google Calling System, for example, the geographically situated calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.</p> <p>Individually or in combination with other information, the Google server infrastructure using the Google server software application to communicate the information produced by with the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call and/or the call session information produced by the calling servers to provide access to exchange a message or setup and initiate a VoWiFi and/or Internet-based call, are examples of transmitting an access code reply message including the access code based on the location identifier as set forth in this element.</p>
	<p>[51c-3] to cause the wireless device to use the access code to initiate communications with the destination node through the communications channel.</p>	<p>The Huawei-Google Calling System transmits, to the wireless device, an access code reply message to cause the wireless device to use the access code to initiate communications with the destination node through the communications channel. In the Huawei-Google Calling System, for example, the Google server infrastructure performs this element using the Google VoWiFi and/or Internet-based call server software applications to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g.,</p>

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		<p>voice and video calls) communication to and from supported devices using the Google VoWiFi and/or Internet-based calling client software applications.</p> <p>In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to communicate (or cause to be communicated) the access code reply message as set forth in element [51c-1]. In the Huawei-Google Calling System, for example, the Google server infrastructure uses the Google server software application to communicate (or cause to be communicated) the parts, portions, and/or combinations of information associated with an access code reply message using one or more direct and/or indirect communications and/or combination of communications associated with one or more access servers and/or a combination of access servers associated with the Google server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Google server infrastructure uses the Google server software application to communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the DNS servers. In the Huawei-Google Calling System, for example, the DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers communicate information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call. In the Huawei-Google Calling System, for example, the information produced by the DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the DNS servers. In the Huawei-Google
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Calling System, for example, the packets communicated from (or caused to be communicate by) the DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei-Google Calling System, for example, the DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated calling servers using one or more domain names associated with the Google server infrastructure. In the Huawei-Google Calling System, for example, the DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated calling servers). The DNS servers, for example, identify the geographically situated calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the DNS servers, for example, identify the geographically situated calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated calling servers).

- In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Google server infrastructure uses the Google server software application to communicate (or cause to be communicated) communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the calling servers. In the Huawei-Google Calling System, for example, the calling servers provides access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make VoWiFi and/or Internet-based calls (voice and video). In the Huawei-Google

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Calling System, for example, the calling servers communicate call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make VoWiFi and/or Internet-based calls. In the Huawei-Google Calling System, for example, the call session information produced by the calling servers to provide access to exchange messages and make VoWiFi and/or Internet-based calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the calling servers. In the Huawei-Google Calling System, for example, the packets communicated from (or caused to be communicate by) the calling servers include call session information associated with the calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei-Google Calling System, the call session information associated with the calling servers includes the IP network addresses associated with the geographically situated calling servers. In the Huawei-Google Calling System, for example, the geographically situated calling servers produce the call session information to identify, to the caller's mobile telephone, the calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated calling servers. In the Huawei-Google Calling System, for example, the geographically situated calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei-Google Calling System, for example, the geographically situated calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.

Individually or in combination with other information, the Google server infrastructure using the Google server software application to communicate the information produced by with the DNS servers to provide

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access to the communication networks, the servers, the services, and/or the other resources associated with the Google server infrastructure to exchange a message or setup and initiate a VoWiFi and/or Internet-based call and/or the call session information produced by the calling servers to provide access to exchange a message or setup and initiate a VoWiFi and/or Internet-based call, are examples of transmitting an access code reply message to cause the wireless device to use the access code to initiate communications with the destination node through the communications channel as set forth in this element.

The Huawei-Google Calling System enables establishing communications between a wireless device and a destination node of a communications network as described in the '721 Patent and defined in claim 51, literally and/or under the doctrine of equivalents. The Huawei-Google Calling System uses access code request/response messages to produce an access code identifying a communications channel on a gateway through which communications between the wireless apparatus and the destination node can be conducted. In the Huawei-Google Calling System, the access code is based on a geographical location of the wireless apparatus. The access code, alone or in combination with other information for example, identifies an IP address associated with one or more calling servers having a communication channel through which the caller's mobile telephone may initiate a VoWiFi and/or Internet-based call. In the Huawei-Google Calling System, an access code comprises information or a combination of information, such as one or IP addresses associated with one or more calling servers (having communication channels for VoWiFi and/or Internet-based calls between mobile telephones) and/or call session information provided by the calling servers that enables a call to be made to a callee. The communications channels also can connect the caller's mobile telephone with other devices using telephone lines in a Public Switched Telephone Network (PSTN). The calling servers can direct calls that are received on the communications channels to a gateway leading to the PSTN. The calling servers use the communications channels to cooperate with an IP network and the gateway to the PSTN to cause a call involving the caller's mobile telephone to be routed through the IP

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		<p>network and continue to the PSTN. The communication channels provided by the calling servers provide the benefit of identifying communication infrastructure that, in view of the mobile telephone's location, is optimal for use with the caller's mobile telephone, both over the IP network and the PSTN. In particular, the use of access codes associated with the caller's location facilitates minimized transmission times over the IP network.</p>
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APPENDIX A

Appendix A demonstrates that, in the Huawei-Google Calling System, direct infringement occurs by using Huawei devices with the following Google server infrastructures to produce an access code based on a location identifier and/or based on a location pre-associated with a mobile telephone and which is used by the Huawei devices and Google to initiate a VoWiFi and/or Internet-based call as described in the ‘721 Patent and defined in the asserted claims, literally and/or under the doctrine of equivalents.

Google-Fi

In the Huawei-Google Calling System, Huawei actively encourages and enables Huawei devices and Google to initiate a VoWiFi call as described in the ‘721 Patent and defined in the asserted claims, literally and/or under the doctrine of equivalents. In the Huawei-Google Calling System, for example, the caller’s mobile telephone (e.g., a Huawei Nexus 6p manufactured by Huawei for use by Google with Google Fi) uses the Huawei and/or Google-Fi hardware, firmware, configuration data, and/or VoWiFi software application to communicate at least one DNS query to the DNS servers associated with the Google VoWiFi server infrastructure to seek one or more IP network addresses associated with geographically situated calling servers identified associated with the Google VoWiFi server infrastructure using at least the following exemplary domain name(s):

- epdg.epc.mnc260.mcc310.pub.3gppnetwork.org

In the Huawei-Google Calling System, for example, the DNS servers communicate to Huawei devices one or more DNS replies in response to the DNS queries. In the Huawei-Google Calling System, for example, the DNS servers communicate one or more IP network addresses associated with geographically situated calling servers to use to initiate the VoWiFi call in at least the following exemplary block(s) of IP network addresses assigned to the Google server infrastructure and owned or operated by Google:

- 208.54.0.0/17

In the Huawei-Google Calling System, for example, the DNS servers communicate to the Huawei devices the IP network addresses associated with the geographically located calling servers to use to initiate the VoWiFi call based on a location identifier and/or based on a location pre-associated with the Huawei devices.

CHART A

In a set of tests associated with the scenario set forth in **Chart A** using DNS, an initiating device associated with an IP network address allocated by an Internet service provider within the following geographic regions communicated one or more DNS requests to the DNS servers using the above domain names. **Appendix A** sets forth that DNS replies in response to DNS requests made to the DNS servers by the initiating device (e.g., by contacting the Google public DNS server at an IP address of 8.8.8.8) result in the initiating device obtaining, from the DNS servers, the IP network addresses associated with the geographically located calling servers to use to initiate the VoWiFi call based on a location associated with the IP network address allocated to the initiating device. In the Huawei-Google Calling System, for example, the initiating device also obtains the same IP network addresses associated with the geographically located calling servers to use to initiate the VoWiFi call based on a location associated with the IP network address allocated to the initiating device by the initiating device directly contacting the DNS servers associated with Google-Fi.

Appendix A sets forth that, in the Huawei-Google Calling System, the IP network addresses associated with the calling servers across geographic locations in the following table are being selected based on a location associated with the IP network address allocated to the initiating device. The following table provides an example of the IP network addresses returned by the DNS servers (together with a count, if available, indicating the number of times each unique IP address was resolved by the DNS servers).

California	Florida
epdg.epc.mnc260.mcc310.pub.3gppnetwork.org (epdg.epc.geo.mnc260.mcc310.pub.3gppnetwork.org)	epdg.epc.mnc260.mcc310.pub.3gppnetwork.org (epdg.epc.geo.mnc260.mcc310.pub.3gppnetwork.org)
208.54.148.227	208.54.44.163
208.54.159.227	208.54.83.96
208.54.2.163	208.54.85.64
208.54.2.67	
208.54.39.3	
208.54.39.35	

Google Hangouts

CHART A

Huawei actively encourages and enables Huawei devices and Google to initiate an Internet-based call as described in the ‘721 Patent and defined in the asserted claims, literally and/or under the doctrine of equivalents. In the Huawei-Google Calling System, for example, the caller’s mobile telephone (e.g., a Huawei Nexus 6p manufactured by Huawei for use by Google with Google Voice/Hangouts/Duo) uses the Google Internet-based calling client software applications to communicate at least one DNS query to the DNS servers associated with the Google Internet-based calling server infrastructure to seek one or more IP network addresses associated with one or more geographically situated calling servers identified using one or more of the following domain names:

- googleapis.com
- googlevideo.com

In the Huawei-Google Calling System, for example, the DNS servers communicate to the Huawei devices one or more DNS replies in response to the DNS queries. For example, the DNS servers communicate one or more IP network addresses associated with geographically situated calling servers to use to initiate the Internet-based call in the following one or more blocks of IP network addresses assigned to the Google server infrastructure and owned or operated by Google:

- 172.217.0.0/16
- 216.58.192/19

Thus, the DNS servers communicate to the Huawei devices the IP network addresses associated with the geographically located calling servers to initiate the Internet-based call based on a location identifier and/or based on a location pre-associated with the Huawei devices.

In a set of tests associated with the scenario set forth in **Chart A** using DNS, an initiating device associated with an IP network address allocated by an Internet service provider within the following geographic regions communicated one or more DNS requests to the DNS servers using the above domain names. **Appendix A** sets forth that DNS replies in response to DNS requests made to the DNS servers by the initiating device (e.g., by contacting the Google public DNS server at an IP address of 8.8.8.8) result in the initiating device obtaining, from the DNS servers, the IP network addresses associated with the geographically located calling servers to initiate the Internet-based call based on a location associated with the IP network address allocated to the initiating device. In the Huawei-Google Calling System, for example, the initiating device also obtains the same IP

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network addresses associated with the geographically located calling servers to initiate the Internet-based call based on a location associated with the IP network address allocated to the initiating device by the initiating device directly contacting the DNS servers associated with Google Hangouts.

Appendix A sets forth that, in the Huawei-Google Calling System, the IP network addresses associated with the calling servers across geographic locations in the following table are being selected based on a location associated with the IP network address allocated to the initiating device. The following table provides an example of the IP network addresses returned by the DNS servers (together with a count, if available, indicating the number of times each unique IP address was resolved by the Hangouts DNS servers).

California	Florida
googleapis.com	googleapis.com
googlevideo.com	googlevideo.com
216.58.194.196	172.217.3.132
172.217.6.68	172.217.8.100

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APPENDIX B

Appendix B demonstrates that, in the Huawei-Google Calling System, Huawei purposefully caused or encouraged infringement using Huawei devices with the Google server infrastructure (whether the Google VoWiFi server infrastructure and/or the Google Internet-based calling server infrastructure) to produce an access code based on a location identifier and/or based on a location pre-associated with a mobile telephone and which is used by the Huawei devices and Google to initiate a VoWiFi and/or Internet-based call as described in the '721 Patent and defined in the asserted claims, literally and/or under the doctrine of equivalents.

For example, Huawei actively encourages and enables users of Huawei devices on the Huawei website through one or more electronic storefronts to purchase and use Huawei devices with Google. Huawei sells or has sold on their website and/or through Google, Huawei phones specific to Google in the US (e.g., the Nexus 6P). Huawei actively encourages and enables users of Huawei devices on the Huawei website through one or more support articles to configure and use Huawei devices with VoWiFi on Google-Fi in the US. Huawei actively encourages and enables users to make calls and send messages over a Wi-Fi connection when cell service isn't available. Additionally, Huawei actively encourages and enables users of Huawei devices manufactured specifically for Google on the Google website through one or more support articles to configure and use Huawei devices to make Internet-based calls and send messages using Google Voice/Hangouts/Duo.

A=Intentional Encouragement - Specific Instructions On How To Use Accused Feature

B=Purposeful Causation -Pre-installed Applications That Will Cause Some Users To Infringe

	Category	Third-Party	Description/URL
1.	A,B	Google (Google Fi and Google Hangouts)	<p>Title: Nexus 6P</p> <p>Huawei actively encourages and enables users of Huawei devices to use their devices with major wireless telephone companies in the US. The Nexus 6P is an Android smartphone developed and marketed by Google and manufactured by Huawei.</p>

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			https://en.wikipedia.org/wiki/Nexus_6P
2.	A,B	All major wireless telephone carriers Google (Google Fi and Google Hangouts)	Nexus 6P tech specs https://support.google.com/nexus/answer/6102470?hl=en#zippy=%2Cnexus-p https://support.google.com/product-documentation/answer/6301411?hl=en
3.	A,B	All major GSM carriers	Title: Huawei Mate 20 Pro (GSM Only, No CDMA) Unlocked 6GB RAM 128GB Storage Single Sim LYA-L09 - International Version/No Warranty – Black Huawei actively encourages and enables users of Huawei devices to use their devices with major wireless telephone companies in the US. Huawei sells smartphones through Amazon. https://www.amazon.com/dp/B07J6NMTVG?asc_campaign=commerce-pra&asc_refurl=https%3A%2F%2Fwww.businessinsider.com%2Fhow-to-buy-a-huawei-smartphone-if-you-live-in-united-states-2019-1&asc_source=browser&tag=biauto-43024-20

CHART B

Huawei Technologies America, Inc. (“Huawei”) infringes the Patents-in-Suit by the “Huawei Cloud Meeting Calling System.” The Huawei Cloud Meeting Calling System includes desktop computers, laptops, tablets, smartphones, and other mobile devices as well as enterprise to small office-home office level telephony hardware, software, and cloud-based services manufactured and supported by Huawei. The Huawei Cloud Meeting Calling System actively encourages and enables users of desktop computers, laptops, tablets, smartphones, and other mobile devices to participate in mobile telephone roaming as described in U.S. Patent No. 10,880,721 (hereinafter the ‘721 Patent) and set forth in the asserted claims.

The Huawei Cloud Meeting Calling System includes Huawei Cloud Meeting, or simply Cloud Meeting, which is a cross-platform centralized messaging and communication (e.g., voice-over-IP) service owned by Huawei. The Huawei Cloud Meeting Calling System allows smartphone and desktop users to send text messages and voice messages, make voice and video calls, and share images, documents, user locations, and other content. See <https://www.huaweicloud.com/intl/en-us/product/meeting.html>.

In the Huawei Cloud Meeting Calling System, users of the desktop computers, laptops, tablets, smartphones, and mobile devices can send messages including text, images, video and audio to others using Cloud Meeting client software applications developed by Huawei for supported devices to communicate with a Huawei server infrastructure owned and operated by Huawei. The Cloud Meeting client software applications running on most supported devices includes Huawei Calling, which is a voice and video calling feature incorporating techniques described in the ‘721 Patent. Additionally, in the Huawei Cloud Meeting Calling System, the Huawei server infrastructure includes one or more communication networks, one or more servers, one or more services, and/or one or more other resources associated with the Huawei server infrastructure and using Cloud Meeting server software applications developed by Huawei to implement setup, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from the supported devices using the Cloud Meeting client software applications. The Cloud Meeting server software applications running on servers owned and operated by Huawei include the Huawei Calling feature incorporating techniques described in the ‘721 Patent.

Chart B applies independent claim 51 of the ‘721 Patent to the Huawei Cloud Meeting Calling System.

CHART B

Chart B demonstrates that in the Huawei Cloud Meeting Calling System, the Huawei server infrastructure owned and/or operated by Huawei produces an access code based on a location identifier associated with a mobile telephone or other wireless device, the access code being used by the wireless device to initiate a call as described in the ‘721 Patent and defined in the asserted claims, literally and/or under the doctrine of equivalents. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure produces an access code comprising one or more portions and/or a combination of information, for example, an access code comprising information identifying one or more Internet Protocol (IP) network addresses associated with one or more Huawei Calling servers in the Huawei server infrastructure and/or call session information obtained via one or more Huawei Calling servers in the Huawei server infrastructure. The call session information, for example, identifies a communications channel usable by the wireless device to cause a routing controller (e.g., one or more Huawei Calling servers in the Huawei server infrastructure) to establish a call to a callee using the channel. Thus, the Huawei server infrastructure enables wireless device roaming using the access code as described in the ‘721 Patent and defined in the asserted claims, literally and/or under the doctrine of equivalents.

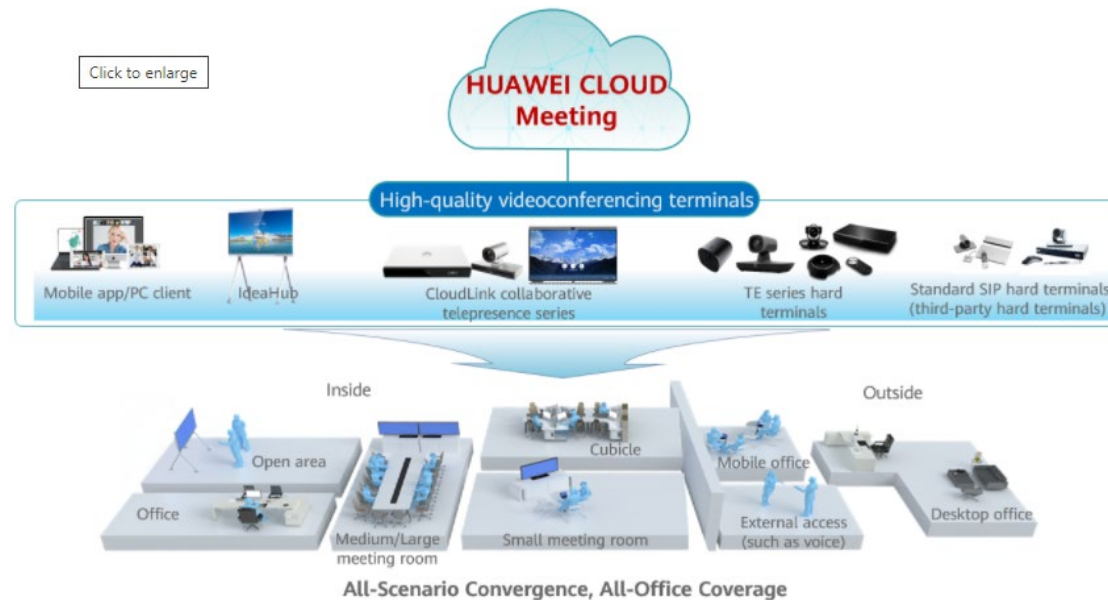
Chart B uses one scenario of infringement as an example to demonstrate how elements of the asserted claims read on the use of a domain name system (DNS) associated with the Huawei Cloud Meeting Calling System to produce one or more portions and/or combinations of information representing an access code that is based on a location identifier identifying a geographical location of a wireless device and that identifies one or more Internet Protocol (IP) network addresses associated with one or more calling servers and/or call session information obtained via the one or more calling servers to enable wireless device roaming or mobile telephone roaming as described in the ‘721 Patent and defined in the asserted claims, literally and/or under the doctrine of equivalents. The scenario set forth in **Chart B** using DNS is one example made without limitation to one or more additional scenarios of infringement, which may be described in other charts using at least some of the components and/or processes associated with the Huawei Cloud Meeting Calling System already identified in **Chart B**, further demonstrating how the asserted claims read, literally and/or under the doctrine of equivalents, on the Huawei Cloud Meeting Calling System.

CHART B**U.S. Patent No. 10,880,721**

51.	[51p] A method for enabling a wireless device to establish communications with a destination node, the method comprising:	<p>The Huawei Cloud Meeting Calling System performs a method for enabling a wireless device to establish communications with a destination node.</p> <p>In the Huawei Cloud Meeting Calling System, for example, establishing communications between a wireless device (e.g., a caller's mobile telephone) and a destination node of a communications network (e.g., a callee's mobile telephone) as described in the '721 Patent and defined in the method of claim 51, literally and/or under the doctrine of equivalents, is performed by the caller's mobile telephone communicating with the Huawei server infrastructure, which includes:</p> <ul style="list-style-type: none"> • One or more Huawei domain name system (DNS) servers associated with the Huawei server infrastructure that provide a naming system for one or more communication networks, one or more servers, one or more services, and/or other resources associated with the Huawei server infrastructure and using one or more Cloud Meeting server software applications developed by Huawei to implement initialization, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Cloud Meeting client software applications. The Huawei DNS servers associate domain names used by the Cloud Meeting client software application with various information (such as IP network addresses) that provide access to the communication networks, servers, services, and/or other resources associated with the Huawei server infrastructure. • One or more Huawei Calling servers associated with the Huawei server infrastructure that provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Cloud Meeting client software applications. The Huawei Calling servers include the Cloud Meeting server software applications developed by Huawei and provide access to exchange messages (including chats, group chats,
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CHART B

images, videos, voice messages and files) and make Cloud Meeting calls (voice and video) around the world.



<https://support.huaweicloud.com/intl/en-us/productdesc-meeting/productdesc.html>

<https://support.huaweicloud.com/intl/en-us/productdesc-meeting/meeting-productdesc.pdf> (“HUAWEI CLOUD MEETING: Service Overview”).

In the Huawei Cloud Meeting Calling System, for example, establishing communications between a wireless device (e.g., the caller’s mobile telephone) and a destination node of a communications network (e.g., the callee’s mobile telephone) is performed when the Huawei server infrastructure owned and operated by Huawei produces an access code based on a geographic location associated with the wireless device and which is used by the wireless device to initiate communications from the wireless device to the destination

CHART B

		node as described in the '721 Patent and defined in claim 51, literally and/or under the doctrine of equivalents. In the Huawei Cloud Meeting Calling System, the caller's mobile telephone starts a Cloud Meeting call using the Cloud Meeting client software application. The caller's mobile telephone uses the Cloud Meeting client software application to establish communication with and through the Huawei server infrastructure to initiate the Cloud Meeting call to a callee's mobile telephone.
	[51a-1] receiving from the wireless device an access code request message	<p>The Huawei Cloud Meeting Calling System receives from the wireless device an access code request message. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure performs this element using the Cloud Meeting server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Cloud Meeting client software applications.</p> <p>In the Huawei Cloud Meeting Calling System, for example, the caller's mobile telephone uses the Cloud Meeting client software application to communicate (or cause to be communicated) one or more parts, portions, and/or combinations of information associated with an access code request message. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to obtain (or cause to be obtained) the parts, portions, and/or combinations of information associated with the access code request message using the communications and/or combination of communications associated with the callee's mobile telephone with one or more access servers and/or a combination of access servers associated with the Huawei server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Huawei server infrastructure uses the Cloud Meeting server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone with one or

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	<p>more of the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call. In the Huawei Cloud Meeting Calling System, for example, the information requesting the Huawei DNS servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone with the Huawei DNS servers comprise one or more DNS queries that query the Huawei DNS servers for one or more IP network addresses associated with one or more of the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure obtains at least one DNS query asking the Huawei DNS servers for the IP network addresses associated with the Huawei Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure obtains at least one DNS query using one or more domain names associated with the Huawei server infrastructure to obtain the IP network addresses associated with the geographically situated Huawei Calling servers. One or more domain names and one or more blocks of IP network addresses owned by Huawei and used by the Cloud Meeting client software application In the Huawei Cloud Meeting Calling System, for example to obtain the IP network addresses associated with the geographically situated Huawei Calling servers, are set forth in</p>
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CHART B

		<p>Appendix A. Additionally, Appendix A sets forth that one or more communications to the Huawei DNS servers using the domain names owned by Huawei, for example based on the location associated with the communications, results in obtaining one or more IP network addresses associated with the blocks of IP network addresses owned by Huawei and geographically situated Huawei Calling servers associated with the Huawei server infrastructure.</p> <ul style="list-style-type: none"> • In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers provide access to the Cloud Meeting server software applications developed by Huawei to exchange messages (including chats, group chats, images, videos, voice messages and files) and make Cloud Meeting calls (voice and video). For example, the Huawei Calling servers obtain the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the Huawei Calling servers to provide access to exchange a message or setup and initiate a Cloud Meeting call. In the Huawei Cloud Meeting Calling System, for example, the information requesting the Huawei Calling servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone, the packet(s) comprising information asking one or more geographically situated Huawei Calling servers for call session information. For example, the caller's mobile telephone and the geographically situated Huawei Calling servers can communicate to establish the call session information to select and connect to a calling gateway, establish signaling, establish a media port and provide connectivity negotiation with calling gateway and/or peer-to-peer using protocols such as ICE/STUN/TURN, and initiate via the calling gateway a Cloud Meeting call, a Cloud Meeting group/conference call, and/or a PSTN call with the destination node identified by the destination node identifier. See https://support.huaweicloud.com/intl/en-us/productdesc-meeting/productdesc.html ("What is HUAWEI CLOUD Meeting?").
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		Individually or in combination with other information, the Huawei server infrastructure using the Cloud Meeting server software application to receive and process the information requesting the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call and/or to receive and process the information requesting the Huawei Calling servers to provide access to exchange a message or setup and initiate a Cloud Meeting call, are examples of receiving from the wireless device an access code request message as set forth in this element.
	[51a-2] including a destination node identifier associated with the destination node and	<p>The Huawei Cloud Meeting Calling System receives from the wireless device an access code request message, where the access code request message includes a destination node identifier associated with the destination node. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure performs this element using the Cloud Meeting server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Cloud Meeting client software applications.</p> <p>In the Huawei Cloud Meeting Calling System, for example, the caller's mobile telephone uses the Cloud Meeting client software application to communicate (or cause to be communicated) an access code request message comprising one or more parts, portions, and/or combinations of information. In the Huawei Cloud Meeting Calling System, for example, composing a message or initiating a Cloud Meeting call using the Cloud Meeting client software application begins with a user entering of a destination node identifier associated with a destination node with which the user wishes to communicate. In the Huawei Cloud Meeting Calling System, for example, the user input, which may comprise a partial or complete name, email address, telephone number, or device identifier, is input directly and/or indirectly into a contact list search box, on a touch screen displaying contacts to obtain the destination node identifier, and/or via voice command. In the</p>

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	<p>Huawei Cloud Meeting Calling System, for example, the user input associated with the caller's mobile telephone comprises one or more user names, email addresses, device identifiers, and/or telephone numbers associated with the destination node which the user wishes to communicate. In the Huawei Cloud Meeting Calling System, for example, the caller's mobile telephone uses the Cloud Meeting client software application to obtain the user name(s), email address(es), device identifier(s), and/or telephone number(s) associated with the destination node with which the user wishes to communicate from the user input associated with the caller's mobile telephone.</p> <p><i>See:</i> https://support.huaweicloud.com/intl/en-us/productdesc-meeting/meeting-productdesc.pdf ("HUAWEI CLOUD MEETING: Service Overview"). The Huawei Cloud Meeting Calling System supports users "calling other numbers of themselves" and "calling other numbers of a participant" in a meeting. <i>Id.</i> at page 4. <i>See also:</i> https://www.huaweicloud.com/en-us/product/privatenumber.html ("Private Number" product feature supports real phone numbers and virtualized numbers such as anonymous phone numbers for calling and texting)</p> <p>In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to receive (or cause to be received) the parts, portions, and/or combinations of information associated with the access code request message as set forth in element [51a-1]. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to obtain (or cause to be obtained) the parts, portions, and/or combinations of information associated with the access code request message using the communications and/or combination of communications associated with the callee's mobile telephone with one or more access servers and/or a combination of access servers associated with the Huawei server infrastructure:</p>
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		<ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Huawei server infrastructure uses the Cloud Meeting server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone interacting with one or more of the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call. In the Huawei Cloud Meeting Calling System, for example, the information requesting the Huawei DNS servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone interacting with the Huawei DNS servers comprise one or more DNS queries that query the Huawei DNS servers for one or more IP network addresses associated with one or more of the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure obtains at least one DNS query asking the Huawei DNS servers for the IP network addresses associated with the Huawei Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure obtains at least one DNS query using one or more domain names associated with the Huawei server infrastructure to obtain the IP network addresses associated with
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		<p>the geographically situated Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the DNS query includes a destination node identifier associated with the destination and used by the Huawei DNS servers to obtain the IP network addresses associated with the geographically situated Huawei Calling servers.</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Huawei server infrastructure uses the Cloud Meeting server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone with one or more of the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers provide access to the Cloud Meeting server software applications developed by Huawei to exchange messages (including chats, group chats, images, videos, voice messages and files) and make Cloud Meeting calls (voice and video). In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers obtain the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the Huawei Calling servers to provide access to exchange a message or setup and initiate a Cloud Meeting call. In the Huawei Cloud Meeting Calling System, for example, the information requesting the Huawei Calling servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone with the Huawei Calling servers comprise information asking one or more geographically situated Huawei Calling servers for call session information. In the Huawei Cloud Meeting Calling System, for example, information asking one or more geographically situated Huawei Calling servers for call session information includes a destination node identifier associated with the destination node. In the Huawei Cloud Meeting Calling System, for example, the caller's
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		<p>mobile telephone and the geographically situated Huawei Calling servers communicate to establish the call session information using the destination node identifier associated with the destination node.</p> <p>Individually or in combination with other information, the Huawei server infrastructure using the Cloud Meeting server software application to obtain the information requesting the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call and/or the information requesting the Huawei Calling servers to provide access to exchange a message or setup and initiate a Cloud Meeting call, wherein the request(s) for access identify a user name, email address, telephone number, and/or a device identifier associated with the called destination node, are examples of receiving from the mobile telephone an access code request message including a destination node identifier associated with the destination node as set forth in this element.</p>
	<p>[51a-3] a location identifier identifying a geographical location of the wireless device;</p>	<p>The Huawei Cloud Meeting Calling System receives from the wireless device an access code request message, where the access code request message includes a location identifier identifying a geographical location of the wireless device. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure performs this element using the Cloud Meeting server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Cloud Meeting client software applications.</p> <p>In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to receive (or cause to be received) the parts, portions, and/or combinations of information associated with the access code request message as set forth in element [51a-1]. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud</p>

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		<p>Meeting server software application to obtain (or cause to be obtained) the parts, portions, and/or combinations of information associated with the access code request message using the communications and/or combination of communications associated with the callee's mobile telephone interacting with one or more access servers and/or a combination of access servers associated with the Huawei server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Huawei server infrastructure uses the Cloud Meeting server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone interacting with one or more of the Huawei DNS servers. For example, the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call. In the Huawei Cloud Meeting Calling System, for example, the information requesting the Huawei DNS servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone interacting with the Huawei DNS servers comprise one or more DNS queries that query the Huawei DNS servers for one or more IP network addresses associated with one or more of the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure obtains at least one DNS query asking the Huawei DNS servers for the IP network addresses associated with the Huawei Calling servers
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		<p>geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure obtains at least one DNS query using one or more domain names associated with the Huawei server infrastructure to obtain the IP network addresses associated with the geographically situated Huawei Calling servers. The Huawei DNS servers use the one or more IP network addresses directly and/or indirectly associated with the caller's mobile telephone as a location identifier identifying a geographical location of the wireless apparatus.</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Huawei server infrastructure uses the Cloud Meeting server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone interacting with one or more of the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers provide access to the Cloud Meeting server software applications developed by Huawei to exchange messages (including chats, group chats, images, videos, voice messages and files) and make Cloud Meeting calls (voice and video). In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers obtain the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the Huawei Calling servers to provide access to exchange a message or setup and initiate a Cloud Meeting call. In the Huawei Cloud Meeting Calling System, for example, the information requesting the Huawei Calling servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone interacting with the Huawei Calling servers comprise information asking one or more geographically situated Huawei Calling servers for call session
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		<p>information. In the Huawei Cloud Meeting Calling System, for example, the caller's mobile telephone and the geographically situated Huawei Calling servers communicate to establish the call session information using the location identifier identifying a geographical location of the wireless device. The Huawei Calling servers use the one or more IP network addresses directly and/or indirectly associated with the caller's mobile telephone and/or a current or pre-associated location information associated with the caller's mobile telephone as a location identifier identifying a geographical location of the wireless apparatus.</p> <p>The IP network addresses directly and/or indirectly associated with the caller's mobile telephone identify a location associated with the caller's mobile telephone, for example, as one or more absolute and relative locations:</p> <ul style="list-style-type: none"> • an actual geographic location associated with the caller's mobile telephone, which is identified by an IP network address assigned to the caller's mobile telephone by a service provider, such as a wireless carrier or Internet Service Provider (ISP); • an actual geographic location associated with the caller's mobile telephone, which is identified by an IP network address assigned to a router by a service provider, such as a wireless carrier or ISP, and through which the caller's mobile telephone directly or indirectly communicates with the Huawei server infrastructure; • an actual geographic location associated with the caller's mobile telephone, which is identified by an IP network address assigned to a proxy server by a service provider independent of the Huawei server infrastructure, such as a wireless carrier or ISP, and which is physically located at an office/data center owned or leased by the service provider or a customer of the service provider and through which the caller's mobile telephone directly or indirectly communicates with the Huawei server infrastructure;
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		<ul style="list-style-type: none"> • a relative geographic location associated with the caller's mobile telephone, which is identified using a location physically or logically relative to the Huawei server infrastructure by an IP network address assigned by a service provider independent of the Huawei server infrastructure to the caller's mobile telephone, a router through which the caller's mobile telephone communicates with the Huawei server infrastructure, or a proxy server through which the caller's mobile telephone communicates with the Huawei server infrastructure; • a proximate location associated with the caller's mobile telephone, which is identified using a location physically or logically approximate to the Huawei server infrastructure by an IP network address assigned by a service provider independent of the Huawei server infrastructure to the caller's mobile telephone, a router through which the caller's mobile telephone communicates with the Huawei server infrastructure, or a proxy server through which the caller's mobile telephone communicates with the Huawei server infrastructure. <p>The current or pre-associated location information associated with the caller's mobile telephone identify a location associated with the caller's mobile telephone, such as one or more absolute and relative locations as:</p> <ul style="list-style-type: none"> • a physical location, such as a street address, latitude/longitude, and GPS coordinates. • a logical or virtual location, such as a communications network, Internet Service Provider, Wireless Service Provider, and Wireless Carrier. <p>Individually or in combination with other information, the Huawei server infrastructure using the Cloud Meeting server software application to obtain the information requesting the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call and/or the information requesting the Huawei Calling servers to provide access to exchange a message or setup and initiate a Cloud Meeting call, for example, where the Huawei Cloud Meeting Calling System receives one or</p>
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		more IP network addresses identifying the mobile telephone's geographical location and/or receives location information associated with the caller's wireless device (e.g., a mobile telephone) , are examples of receiving from the wireless device an access code request message including a location identifier identifying a geographical location of the wireless device as set forth in this element.
	[51b-1] in response to receiving the access code request message, causing a routing controller to produce an access code identifying a communications channel on a gateway through which communications between the wireless device and the destination node can be conducted,	<p>The Huawei Cloud Meeting Calling System, in response to receiving the access code request message, causes a routing controller to produce an access code identifying a communications channel on a gateway through which communications between the wireless device and the destination node can be conducted. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure performs this element using the Cloud Meeting server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Cloud Meeting client software applications. The identification of a communication channel on a gateway is performed by a routing controller of the Huawei Cloud Meeting Calling System.</p> <p>In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to obtain (or cause to be obtained) an access code request message as set forth in element [51a et seq]. In response to the access code request message, for example, in the Huawei Cloud Meeting Calling System, the Huawei server infrastructure produces an access code reply message using the parts, portions, and/or combinations of information associated with the access code request message communicated from (or caused to be communicate by) the callee's mobile telephone. The Huawei server infrastructure uses the Cloud Meeting server software application to produce (or cause to be produced) one or more parts, portions, and/or combinations of information associated with the access code reply message, such as an access code. In the Huawei Cloud Meeting Calling System, for example, the access code includes one or more parts, portions, and/or combinations of information. In the Huawei Cloud Meeting Calling System,</p>

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		<p>for example, the Huawei server infrastructure uses the Cloud Meeting server software application to produce (or cause to be produced) the parts, portions, and/or combinations of information associated with the access code reply message (and the access code) using one or more access servers and/or a combination of access servers associated with the Huawei server infrastructure:</p> <ul style="list-style-type: none"> • In one or more operations associated with causing a routing controller to produce an access code, the Huawei server infrastructure uses the Cloud Meeting server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce (or cause to be produced) information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call. In the Huawei Cloud Meeting Calling System, for example, the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with Huawei Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce at least one DNS reply
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that identifies the IP network addresses associated with one or more geographically situated Huawei Calling servers using one or more domain names associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more Huawei Calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated Huawei Calling servers). The Huawei DNS servers, for example, identify the geographically situated Huawei Calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the Huawei DNS servers, for example, identify the geographically situated Huawei Calling servers to the caller's mobile telephone as providing access to one or more communications channels on a gateway (or, alternatively, the geographically situated Huawei Calling servers incorporating such a gateway) through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated Huawei Calling servers).

- In one or more operations associated with causing a routing controller to produce an access code, the Huawei server infrastructure uses the Cloud Meeting server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the geographically situated Huawei Calling servers identified by the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers provide access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make Cloud Meeting calls (voice and video). In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers produce (or caused to be produced) call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make Cloud Meeting calls. In the Huawei Cloud Meeting

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Calling System, for example, the call session information produced by the Huawei Calling servers to provide access to exchange messages and make Cloud Meeting calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei Calling servers include call session information associated with the Huawei Calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, the call session information associated with the Huawei Calling servers includes the IP network addresses associated with the geographically situated Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers produce the call session information to identify, to the caller's mobile telephone, the Huawei Calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, access to one or more communications channels on a gateway (or, alternatively, on a gateway incorporated within the geographically situated Huawei Calling servers) through which communications between the caller's mobile telephone and the destination node can be conducted.

Individually or in combination with other information, the Huawei server infrastructure using the Cloud Meeting server software application to produce the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated

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		<p>with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call and/or to communicate the call session information produced by the Huawei Calling servers to provide access to exchange a message or setup and initiate a Cloud Meeting call, wherein a routing controller of the Huawei Cloud Meeting Calling system identifies a communication channel on a gateway, are examples of causing a routing controller to produce an access code identifying a communications channel on a gateway through which communications between the wireless device and the destination node can be conducted as set forth in this element.</p>
	<p>[51b-2] the access code being based on the location identifier of the access code request message received from the wireless device,</p>	<p>The Huawei Cloud Meeting Calling System, in response to receiving the access code request message, causes a routing controller to produce an access code being based on the location identifier of the access code request message received from the wireless device. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure performs this element using the Cloud Meeting server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Cloud Meeting client software applications.</p> <p>In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to produce (or cause to be produced) one or more parts, portions, and/or combinations of information associated with the access code reply message, such as an access code as set forth in element [51b-1]. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to produce (or cause to be produced) the parts, portions, and/or combinations of information associated with the access code reply message (and the access code) using one or more access servers and/or a combination of access servers associated with the Huawei server infrastructure:</p>

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| | <ul style="list-style-type: none"> • In one or more operations associated with causing a routing controller to produce an access code, the Huawei server infrastructure uses the Cloud Meeting server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce (or cause to be produced) information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call. In the Huawei Cloud Meeting Calling System, for example, the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with Huawei Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated Huawei Calling servers using one or more domain names associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more Huawei Calling servers that |
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are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated Huawei Calling servers). The Huawei DNS servers, for example, identify the geographically situated Huawei Calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the Huawei DNS servers, for example, identify the geographically situated Huawei Calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated Huawei Calling servers).

- In one or more operations associated with causing a routing controller to produce an access code, the Huawei server infrastructure uses the Cloud Meeting server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the geographically situated Huawei Calling servers identified by the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers provide access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make Cloud Meeting calls (voice and video). In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers produce (or caused to be produced) call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make Cloud Meeting calls. In the Huawei Cloud Meeting Calling System, for example, the call session information produced by the Huawei Calling servers to provide access to exchange messages and make Cloud Meeting calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei Calling servers include call session information associated with the

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	<p>Huawei Calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, the call session information associated with the Huawei Calling servers includes the IP network addresses associated with the geographically situated Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers produce the call session information to identify, to the caller's mobile telephone, the Huawei Calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.</p> <p>Individually or in combination with other information, the Huawei server infrastructure using the Cloud Meeting server software application to produce the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call and/or to communicate the call session information produced by the Huawei Calling servers to provide access to exchange a message or setup and initiate a Cloud Meeting call, wherein the information produced to provide access to the Huawei Cloud Meeting Callings System is based on a location associated with a calling wireless device (e.g., mobile telephone), are examples of causing a routing controller to produce an access code being</p>
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		based on the location identifier of the access code request message received from the wireless device as set forth in this element.
	[51b-3] wherein the access code is useable by the wireless device to initiate communications with the destination node through the communications channel; and	<p>The Huawei Cloud Meeting Calling System, in response to receiving the access code request message, causes a routing controller to produce an access code, wherein the access code is useable by the wireless device to initiate communications with the destination node through the communications channel. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure performs this element using the Cloud Meeting server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Cloud Meeting client software applications.</p> <p>In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to produce (or cause to be produced) one or more parts, portions, and/or combinations of information associated with the access code reply message, such as an access code as set forth in element [51b-1]. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to produce (or cause to be produced) the parts, portions, and/or combinations of information associated with the access code reply message (and the access code) using one or more access servers and/or a combination of access servers associated with the Huawei server infrastructure:</p> <ul style="list-style-type: none"> • In one or more operations associated with causing a routing controller to produce an access code, the Huawei server infrastructure uses the Cloud Meeting server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers provide access to the communication networks, the servers, the

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		<p>services, and/or the other resources associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce (or cause to be produced) information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call. In the Huawei Cloud Meeting Calling System, for example, the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicated by) the Huawei DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with Huawei Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated Huawei Calling servers using one or more domain names associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more Huawei Calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated Huawei Calling servers). The Huawei DNS servers, for example, identify the geographically situated Huawei Calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the Huawei DNS servers, for example, identify the geographically situated Huawei</p>
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		<p>Calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated Huawei Calling servers).</p> <ul style="list-style-type: none"> • In one or more operations associated with causing a routing controller to produce an access code, the Huawei server infrastructure uses the Cloud Meeting server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the geographically situated Huawei Calling servers identified by the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers provide access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make Cloud Meeting calls (voice and video). In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers produce (or caused to be produced) call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make Cloud Meeting calls. In the Huawei Cloud Meeting Calling System, for example, the call session information produced by the Huawei Calling servers to provide access to exchange messages and make Cloud Meeting calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei Calling servers include call session information associated with the Huawei Calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, the call session information associated with the Huawei Calling servers includes the IP network addresses associated with the geographically situated Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers produce the call session information to
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identify, to the caller's mobile telephone, the Huawei Calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.

Individually or in combination with other information, the Huawei server infrastructure using the Cloud Meeting server software application to communicate to the wireless device the information produced by the Huawei DNS servers as to which Huawei Calling servers are suitable to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call and/or to communicate call session information produced by the Huawei Calling servers to the wireless device as to what servers can provide access to exchange a message or setup and initiate a Cloud Meeting call, wherein the aforesaid information about access is useable by the wireless device to initiate such communications to the called destination, are examples of causing a routing controller to produce an access code is useable by the wireless device to initiate communications with the destination node through the communications channel as set forth in this element.

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<p>[51c-1] transmitting, to the wireless device, an access code reply message</p>	<p>The Huawei Cloud Meeting Calling System transmits, to the wireless device, an access code reply message.</p> <p>In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure performs this element using the Cloud Meeting server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Cloud Meeting client software applications.</p> <p>In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to obtain (or cause to be obtained) the access code request message associated with the caller's mobile telephone as set forth in elements [51a et seq]. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to produce (or cause to be produced) the access code as set forth in elements [51b et seq]. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to communicate (or cause to be communicated) to the caller's mobile telephone one or more parts, portions, and/or combinations of information associated with an access code reply message. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to communicate (or cause to be communicated) the parts, portions, and/or combinations of information associated with the access code reply message using one or more direct and/or indirect communications and/or combination of communications to the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to communicate (or cause to be communicated) the parts, portions, and/or combinations of information associated with an access code reply message using one or more direct and/or indirect communications and/or combination of communications associated with one or more access servers and/or a combination of access servers associated with the Huawei server infrastructure:</p>
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| | <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Huawei server infrastructure uses the Cloud Meeting server software application to communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers communicate information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call. In the Huawei Cloud Meeting Calling System, for example, the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with Huawei Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated Huawei Calling servers using one or more domain names associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more Huawei Calling servers that |
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		<p>are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated Huawei Calling servers). The Huawei DNS servers, for example, identify the geographically situated Huawei Calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the Huawei DNS servers, for example, identify the geographically situated Huawei Calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated Huawei Calling servers).</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Huawei server infrastructure uses the Cloud Meeting server software application to communicate (or cause to be communicated) communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers provides access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make Cloud Meeting calls (voice and video). In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers communicate call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make Cloud Meeting calls. In the Huawei Cloud Meeting Calling System, for example, the call session information produced by the Huawei Calling servers to provide access to exchange messages and make Cloud Meeting calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei Calling servers include call session information associated with the
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Huawei Calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, the call session information associated with the Huawei Calling servers includes the IP network addresses associated with the geographically situated Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers produce the call session information to identify, to the caller's mobile telephone, the Huawei Calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.

Individually or in combination with other information, the Huawei server infrastructure using the Cloud Meeting server software application to communicate to the wireless device the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call and/or to communicate to the wireless device the call session information produced by the Huawei Calling servers to provide access to exchanging a message or setting up and initiating a Cloud Meeting call, are examples of transmitting an access code reply message as set forth in this element.

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<p>[51c-2] including the access code based on the location identifier,</p>	<p>The Huawei Cloud Meeting Calling System transmits, to the wireless device, an access code reply message, where the access code reply message includes the access code based on the location identifier. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure performs this element using the Cloud Meeting server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Cloud Meeting client software applications.</p> <p>In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to communicate (or cause to be communicated) the access code reply message as set forth in element [51c-1]. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to communicate (or cause to be communicated) the parts, portions, and/or combinations of information associated with an access code reply message using one or more direct and/or indirect communications and/or combination of communications associated with one or more access servers and/or a combination of access servers associated with the Huawei server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Huawei server infrastructure uses the Cloud Meeting server software application to communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers communicate information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or
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	<p>the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call. In the Huawei Cloud Meeting Calling System, for example, the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with Huawei Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated Huawei Calling servers using one or more domain names associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more Huawei Calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated Huawei Calling servers). The Huawei DNS servers, for example, identify the geographically situated Huawei Calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the Huawei DNS servers, for example, identify the geographically situated Huawei Calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated Huawei Calling servers).</p>
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| | <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Huawei server infrastructure uses the Cloud Meeting server software application to communicate (or cause to be communicated) communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers provides access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make Cloud Meeting calls (voice and video). In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers communicate call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make Cloud Meeting calls. In the Huawei Cloud Meeting Calling System, for example, the call session information produced by the Huawei Calling servers to provide access to exchange messages and make Cloud Meeting calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei Calling servers include call session information associated with the Huawei Calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, the call session information associated with the Huawei Calling servers includes the IP network addresses associated with the geographically situated Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers produce the call session information to identify, to the caller's mobile telephone, the Huawei Calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers produce the call session information |
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		<p>based on the geographic location associated with the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.</p> <p>Individually or in combination with other information, the Huawei server infrastructure using the Cloud Meeting server software application to communicate to the wireless device the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call and/or to communicate to the wireless device the call session information produced by the Huawei Calling servers to provide access to exchange a message or setup and initiate a Cloud Meeting call, wherein the information produced to provide access to the Huawei Cloud Meeting Callings System is based on a location associated with the wireless device, are examples of transmitting an access code reply message including the access code based on the location identifier as set forth in this element.</p>
	<p>[51c-3] to cause the wireless device to use the access code to initiate communications with the destination node through the communications channel.</p>	<p>The Huawei Cloud Meeting Calling System transmits, to the wireless device, an access code reply message to cause the wireless device to use the access code to initiate communications with the destination node through the communications channel. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure performs this element using the Cloud Meeting server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the Cloud Meeting client software applications.</p>

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		<p>In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to communicate (or cause to be communicated) the access code reply message as set forth in element [51c-1]. In the Huawei Cloud Meeting Calling System, for example, the Huawei server infrastructure uses the Cloud Meeting server software application to communicate (or cause to be communicated) the parts, portions, and/or combinations of information associated with an access code reply message using one or more direct and/or indirect communications and/or combination of communications associated with one or more access servers and/or a combination of access servers associated with the Huawei server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Huawei server infrastructure uses the Cloud Meeting server software application to communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers communicate information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call. In the Huawei Cloud Meeting Calling System, for example, the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei DNS servers. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei DNS servers include one or more
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CHART B

DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with Huawei Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated Huawei Calling servers using one or more domain names associated with the Huawei server infrastructure. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more Huawei Calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated Huawei Calling servers). The Huawei DNS servers, for example, identify the geographically situated Huawei Calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the Huawei DNS servers, for example, identify the geographically situated Huawei Calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated Huawei Calling servers).

- In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Huawei server infrastructure uses the Cloud Meeting server software application to communicate (or cause to be communicated) communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers provides access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make Cloud Meeting calls (voice and video). In the

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		<p>Huawei Cloud Meeting Calling System, for example, the Huawei Calling servers communicate call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make Cloud Meeting calls. In the Huawei Cloud Meeting Calling System, for example, the call session information produced by the Huawei Calling servers to provide access to exchange messages and make Cloud Meeting calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei Calling servers include call session information associated with the Huawei Calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, the call session information associated with the Huawei Calling servers includes the IP network addresses associated with the geographically situated Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers produce the call session information to identify, to the caller's mobile telephone, the Huawei Calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated Huawei Calling servers. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei Cloud Meeting Calling System, for example, the geographically situated Huawei Calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.</p>
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CHART B

	<p>Individually or in combination with other information, the Huawei server infrastructure using the Cloud Meeting server software application to communicate the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure to exchange a message or setup and initiate a Cloud Meeting call and/or to communicate the call session information produced by the Huawei Calling servers to provide access to exchange a message or setup and initiate a Cloud Meeting call, wherein the information regarding access causes the wireless device to initiate communications through the Huawei Cloud Meeting Calling system, are examples of transmitting an access code reply message to cause the wireless device to use the access code to initiate communications with the destination node through the communications channel as set forth in this element.</p> <p>The Huawei Cloud Meeting Calling System enables establishing communications between a wireless device and a destination node of a communications network as described in the ‘721 Patent and defined in claim 51, literally and/or under the doctrine of equivalents. The Huawei Cloud Meeting Calling System uses access code request/response messages to produce an access code identifying a communications channel on a gateway through which communications between the wireless apparatus and the destination node can be conducted. In the Huawei Cloud Meeting Calling System, the access code is based on a geographical location of the wireless apparatus. The access code, alone or in combination with other information for example, identifies an IP address associated with one or more Cloud Meeting calling servers having a communication channel through which the caller’s mobile telephone may initiate a Cloud Meeting call. In the Huawei Cloud Meeting Calling System, an access code comprises information or a combination of information, such as one or IP addresses associated with one or more Cloud Meeting calling servers (having communication channels for Cloud Meeting calls between mobile telephones) and/or call session information provided by the Cloud Meeting calling servers that enables a call to be made to a callee. The communications channels also can</p>
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CHART B

		<p>connect the caller's mobile telephone with other devices using telephone lines in a Public Switched Telephone Network (PSTN). The Cloud Meeting calling servers can direct calls that are received on the communications channels to a gateway leading to the PSTN. The Cloud Meeting calling servers use the communications channels to cooperate with an IP network and the gateway to the PSTN to cause a call involving the caller's mobile telephone to be routed through the IP network and continue to the PSTN. The communication channels provided by the Cloud Meeting calling servers provide the benefit of a free or lower cost calling area associated with the caller's mobile telephone, both over the IP network and the PSTN. Furthermore, calls may be placed by callers to the IP network within the local calling area so as to minimize transmission times over the IP network.</p>
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CHART B

APPENDIX A

In the Huawei Cloud Meeting Calling System, for example, the caller's mobile telephone uses the Huawei client software application to communicate at least one DNS query to seek one or more IP network addresses associated with one or more geographically situated Huawei Calling servers identified using the following exemplary domain name(s):

- meeting.huaweicloud.com

In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers communicate, to the caller's mobile telephone, one or more DNS replies in response to the DNS queries. In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers communicate one or more IP network addresses in at least the following exemplary block(s) of IP network addresses assigned to the Huawei server infrastructure and owned or operated by Huawei:

- 94.74.64.0/25

In the Huawei Cloud Meeting Calling System, for example, the Huawei DNS servers communicate, to the caller's mobile telephone, the IP network addresses associated with the geographically located Huawei Calling servers based on a location identifier and/or based on a location pre-associated with a mobile telephone.

In a set of tests associated with the scenario set forth in **Chart B** using DNS, an initiating device associated with an IP network address allocated by an Internet service provider within the following geographic regions communicated one or more DNS requests to the Huawei DNS servers using the above domain names. **Appendix A** sets forth that DNS replies in response to DNS requests made to the Huawei DNS servers by the initiating device (e.g., by contacting the Google public DNS server at an IP address of 8.8.8.8) result in the initiating device obtaining, from the Huawei DNS servers, the IP network addresses associated with the geographically located Huawei Calling servers based on a location associated with the IP network address allocated to the initiating device. In the Huawei Cloud Meeting Calling System, for example, the initiating device also obtains the same IP network addresses associated with the geographically located Huawei Calling servers based on a location associated with the IP network address allocated to the initiating device by the initiating device directly contacting the Huawei DNS servers.

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Appendix A sets forth that, in the Huawei Cloud Meeting Calling System, the IP network addresses associated with the Huawei Calling servers across geographic locations in the following table are being selected based on a location associated with the IP network address allocated to the initiating device. The following table provides an example of the IP network addresses returned by the Huawei DNS servers (together with a count, if available, indicating the number of times each unique IP address was resolved by the Huawei DNS servers).

California	Florida
meeting.huaweicloud.com	meeting.huaweicloud.com
94.74.69.128	94.74.69.229

CHART C

Huawei Technologies America, Inc. (“Huawei”) infringes the Patents-in-Suit by the “Huawei CloudLink Calling System.” The Huawei CloudLink Calling System includes desktop computers, laptops, tablets, smartphones, and other mobile devices as well as enterprise to small office-home office level telephony hardware, software, and cloud-based services manufactured and supported by Huawei and used by Huawei enterprise customers. The Huawei CloudLink Calling System actively encourages and enables users of desktop computers, laptops, tablets, smartphones, and other mobile devices and the Huawei enterprise customers to participate in mobile telephone roaming as described in U.S. Patent No. 10,880,721 (hereinafter the ‘721 Patent) and set forth in the asserted claims.

The Huawei CloudLink Calling System includes Huawei CloudLink Video Conferencing Platform, or simply CloudLink, which is a cross-platform centralized messaging and communication (e.g., voice-over-IP) service owned by Huawei. The Huawei CloudLink Calling System allows smartphone and desktop users to send text messages and voice messages, make voice and video calls, and share images, documents, user locations, and other content. See <https://e.huawei.com/en/solutions/enterprise-collaboration/videoconferencing-platform>.

In the Huawei CloudLink Calling System, users of the desktop computers, laptops, tablets, smartphones, and mobile devices can send messages including text, images, video and audio to others using CloudLink client software applications developed by Huawei for supported devices to communicate with a Huawei CloudLink-enabled server infrastructure owned and operated by a Huawei enterprise customer. The CloudLink client software applications running on most supported devices includes Huawei Calling, which is a voice and video calling feature incorporating techniques described in the ‘721 Patent. Additionally, in the Huawei CloudLink Calling System, the Huawei CloudLink-enabled server infrastructure includes one or more communication networks, one or more servers, one or more services, and/or one or more other resources associated with the Huawei CloudLink-enabled server infrastructure and using CloudLink server software applications developed by Huawei to implement setup, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from the supported devices using the CloudLink client software applications. The CloudLink server software applications running on servers owned and operated by the Huawei enterprise customer include the Huawei Calling feature incorporating techniques described in the ‘721 Patent.

Chart C applies independent claim 51 of the ‘721 Patent to the Huawei CloudLink Calling System.

Chart C demonstrates that in the Huawei CloudLink Calling System, the Huawei CloudLink-enabled server infrastructure owned and/or operated by Huawei produces an access code based on a location identifier associated with a mobile telephone or other wireless device, the access

CHART C

code being used by the wireless device to initiate a call as described in the '721 Patent and defined in the asserted claims, literally and/or under the doctrine of equivalents. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure produces an access code comprising one or more portions and/or a combination of information, for example, an access code comprising information identifying one or more Internet Protocol (IP) network addresses associated with one or more Huawei Calling servers in the Huawei server infrastructure and/or call session information obtained via one or more Huawei Calling servers in the Huawei server infrastructure. The call session information, for example, identifies a communications channel usable by the wireless device to cause a routing controller (e.g., one or more Huawei Calling servers in the Huawei server infrastructure) to establish a call to a callee using the channel. Thus, the Huawei CloudLink-enabled server infrastructure enables wireless device roaming using the access code as described in the '721 Patent and defined in the asserted claims, literally and/or under the doctrine of equivalents.

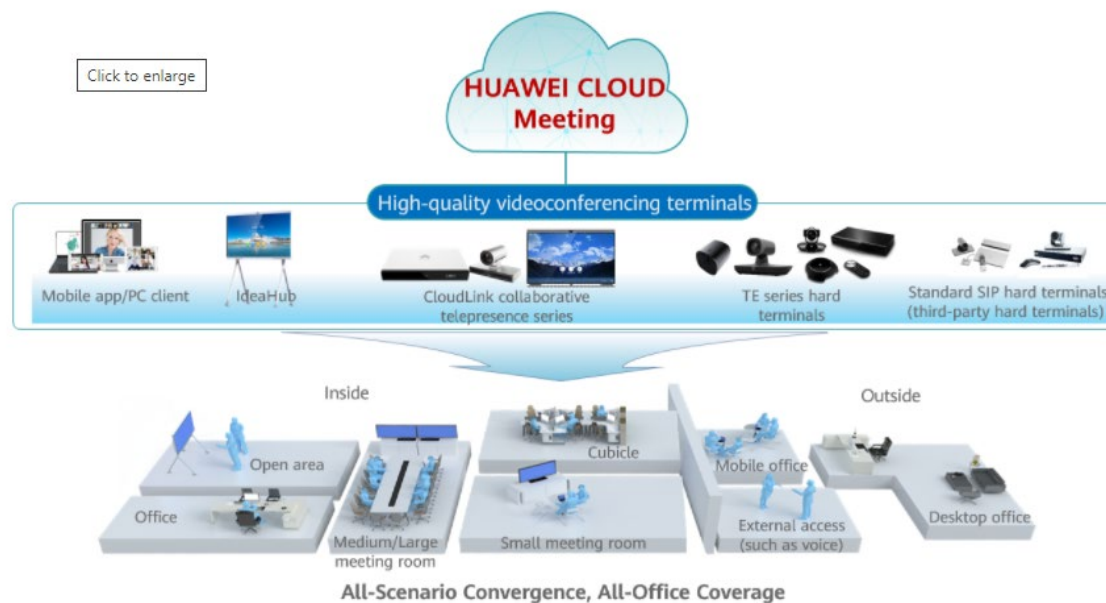
Chart C uses one scenario of infringement as an example to demonstrate how elements of the asserted claims read on the use of a domain name system (DNS) associated with the Huawei CloudLink Calling System to produce one or more portions and/or combinations of information representing an access code that is based on a location identifier identifying a geographical location of a wireless device and that identifies one or more Internet Protocol (IP) network addresses associated with one or more calling servers and/or call session information obtained via the one or more calling servers to enable wireless device roaming or mobile telephone roaming as described in the '721 Patent and defined in the asserted claims, literally and/or under the doctrine of equivalents. The scenario set forth in **Chart C** using DNS is one example made without limitation to one or more additional scenarios of infringement, which may be described in other charts using at least some of the components and/or processes associated with the Huawei CloudLink Calling System already identified in **Chart C**, further demonstrating how the asserted claims read, literally and/or under the doctrine of equivalents, on the Huawei CloudLink Calling System.

CHART C**U.S. Patent No. 10,880,721**

51.	<p>[51p] A method for enabling a wireless device to establish communications with a destination node, the method comprising:</p>	<p>The Huawei CloudLink Calling System performs a method for enabling a wireless device to establish communications with a destination node.</p> <p>In the Huawei CloudLink Calling System, for example, establishing communications between a wireless device (e.g., a caller's mobile telephone) and a destination node of a communications network (e.g., a callee's mobile telephone) as described in the '721 Patent and defined in the method of claim 51, literally and/or under the doctrine of equivalents, is performed by the caller's mobile telephone communicating with the Huawei CloudLink-enabled server infrastructure owned and operated by the Huawei enterprise customer, which includes:</p> <ul style="list-style-type: none"> • One or more Huawei domain name system (DNS) servers associated with the Huawei CloudLink-enabled server infrastructure that provide a naming system for one or more communication networks, one or more servers, one or more services, and/or other resources associated with the Huawei CloudLink-enabled server infrastructure and using one or more CloudLink server software applications developed by the Huawei enterprise customer to implement initialization, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the CloudLink client software applications. The DNS servers associate domain names used by the CloudLink client software application with various information (such as IP network addresses) that provide access to the communication networks, servers, services, and/or other resources associated with the Huawei CloudLink-enabled server infrastructure. • One or more Huawei CloudLink-enabled Calling servers associated with the Huawei CloudLink-enabled server infrastructure that provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the CloudLink client software applications. The Huawei CloudLink-enabled Calling servers
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include the CloudLink server software applications developed by the Huawei enterprise customer and provide access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make CloudLink calls (voice and video) around the world.



<https://e.huawei.com/en/solutions/enterprise-collaboration/videoconferencing-platform>

In the Huawei CloudLink Calling System, for example, establishing communications between a wireless device (e.g., the caller's mobile telephone) and a destination node of a communications network (e.g., the callee's mobile telephone) is performed when the Huawei CloudLink-enabled server infrastructure owned and operated by the Huawei enterprise customer produces an access code based on a geographic location associated with the wireless device and which is used by the wireless device to initiate communications from the wireless device to the destination node as described in the '721 Patent and defined in claim 51, literally

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		and/or under the doctrine of equivalents. In the Huawei CloudLink Calling System, the caller's mobile telephone starts a CloudLink call using the CloudLink client software application. The caller's mobile telephone uses the CloudLink client software application to establish communication with and through the Huawei CloudLink-enabled server infrastructure to initiate the CloudLink call to a callee's mobile telephone.
	[51a-1] receiving from the wireless device an access code request message	<p>The Huawei CloudLink Calling System receives from the wireless device an access code request message. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure performs this element using the CloudLink server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the CloudLink client software applications.</p> <p>In the Huawei CloudLink Calling System, for example, the caller's mobile telephone uses the CloudLink client software application to communicate (or cause to be communicated) one or more parts, portions, and/or combinations of information associated with an access code request message. In the Huawei CloudLink Calling System, for example, the Huawei server infrastructure uses the CloudLink server software application to obtain (or cause to be obtained) the parts, portions, and/or combinations of information associated with the access code request message using the communications and/or combination of communications associated with the callee's mobile telephone with one or more access servers and/or a combination of access servers associated with the Huawei CloudLink-enabled server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone with one or more of the Huawei DNS servers. In the Huawei CloudLink Calling System, for example,

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	<p>the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call. In the Huawei CloudLink Calling System, for example, the information requesting the DNS servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone with the DNS servers comprise one or more DNS queries that query the DNS servers for one or more IP network addresses associated with one or more of the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure obtains at least one DNS query asking the Huawei DNS servers for the IP network addresses associated with the Huawei CloudLink-enabled Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure obtains at least one DNS query using one or more domain names associated with the Huawei CloudLink-enabled server infrastructure to obtain the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. One or more domain names and one or more blocks of IP network addresses owned by the Huawei enterprise customer and used by the CloudLink client software application In the Huawei CloudLink Calling System, for example to obtain the IP network addresses associated with the geographically</p>
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		<p>situated Huawei CloudLink-enabled Calling servers, are set forth in Appendix A. Additionally, Appendix A sets forth that one or more communications to the Huawei DNS servers using the domain names owned by the Huawei enterprise customer, for example based on the location associated with the communications, results in obtaining one or more IP network addresses associated with the blocks of IP network addresses owned by the Huawei enterprise customer and geographically situated Huawei CloudLink-enabled Calling servers associated with the Huawei CloudLink-enabled server infrastructure.</p> <ul style="list-style-type: none">• In the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone with one or more of the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the Huawei Calling servers provide access to the CloudLink server software applications developed by the Huawei enterprise customer to exchange messages (including chats, group chats, images, videos, voice messages and files) and make CloudLink calls (voice and video). For example, the Huawei CloudLink-enabled Calling servers obtain the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the Huawei CloudLink-enabled Calling servers to provide access to exchange a message or setup and initiate a CloudLink call. In the Huawei CloudLink Calling System, for example, the information requesting the Huawei CloudLink-enabled Calling servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone, the packet(s) comprising information asking one or more geographically situated Huawei Calling servers for call session information. For example, the caller's mobile telephone and the geographically situated Huawei CloudLink-enabled Calling servers can communicate to establish the call session information to select and connect to a calling gateway, establish signaling, establish a media port and
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		<p>provide connectivity negotiation with calling gateway and/or peer-to-peer using protocols such as ICE/STUN/TURN, and initiate via the calling gateway a CloudLink call, a CloudLink group/conference call, and/or a PSTN call with the destination node identified by the destination node identifier. See e.g., https://e.huawei.com/en/solutions/enterprise-collaboration/videoconferencing-platform.CloudLink</p> <p>Individually or in combination with other information, the Huawei CloudLink-enabled server infrastructure using the CloudLink server software application to receive and process the information requesting the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call and/or to receive and process the information requesting the Huawei CloudLink-enabled Calling servers to provide access to exchange a message or setup and initiate a CloudLink call, are examples of receiving from the wireless device an access code request message as set forth in this element.</p>
	[51a-2] including a destination node identifier associated with the destination node and	<p>The Huawei CloudLink Calling System receives from the wireless device an access code request message, where the access code request message includes a destination node identifier associated with the destination node. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure performs this element using the CloudLink server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the CloudLink client software applications.</p> <p>In the Huawei CloudLink Calling System, for example, the caller's mobile telephone uses the CloudLink client software application to communicate (or cause to be communicated) an access code request message comprising one or more parts, portions, and/or combinations of information. In the Huawei CloudLink</p>

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	<p>Calling System, for example, composing a message or initiating a CloudLink call using the CloudLink client software application begins with a user entering of a destination node identifier associated with a destination node with which the user wishes to communicate. In the Huawei CloudLink Calling System, for example, the user input, which may comprise a partial or complete name, email address, telephone number, or device identifier, is input directly and/or indirectly into a contact list search box, on a touch screen displaying contacts to obtain the destination node identifier, and/or via voice command. In the Huawei CloudLink Calling System, for example, the user input associated with the caller's mobile telephone comprises one or more user names, email addresses, device identifiers, and/or telephone numbers associated with the destination node which the user wishes to communicate. In the Huawei CloudLink Calling System, for example, the caller's mobile telephone uses the CloudLink client software application to obtain the user name(s), email address(es), device identifier(s), and/or telephone number(s) associated with the destination node with which the user wishes to communicate from the user input associated with the caller's mobile telephone.</p> <p>In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to receive (or cause to be received) the parts, portions, and/or combinations of information associated with the access code request message as set forth in element [51a-1]. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to obtain (or cause to be obtained) the parts, portions, and/or combinations of information associated with the access code request message using the communications and/or combination of communications associated with the callee's mobile telephone with one or more access servers and/or a combination of access servers associated with the Huawei CloudLink-enabled server infrastructure:</p>
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		<ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone interacting with one or more of the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call. In the Huawei CloudLink Calling System, for example, the information requesting the Huawei DNS servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone interacting with the Huawei DNS servers comprise one or more DNS queries that query the Huawei DNS servers for one or more IP network addresses associated with one or more of the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure obtains at least one DNS query asking the Huawei DNS servers for the IP network addresses associated with the Huawei CloudLink-enabled Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure obtains at least one DNS
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	<p>query using one or more domain names associated with the Huawei CloudLink-enabled server infrastructure to obtain the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the DNS query includes a destination node identifier associated with the destination and used by the Huawei DNS servers to obtain the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers.</p> <ul style="list-style-type: none">• In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone with one or more of the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers provide access to the CloudLink server software applications developed by the Huawei enterprise customer to exchange messages (including chats, group chats, images, videos, voice messages and files) and make CloudLink calls (voice and video). In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers obtain the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the Huawei CloudLink-enabled Calling servers to provide access to exchange a message or setup and initiate a CloudLink call. In the Huawei CloudLink Calling System, for example, the information requesting the Huawei CloudLink-enabled Calling servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone with the Huawei CloudLink-enabled Calling servers comprise information asking one or more geographically situated Huawei CloudLink-enabled Calling
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		<p>servers for call session information. In the Huawei CloudLink Calling System, for example, information asking one or more geographically situated Huawei CloudLink-enabled Calling servers for call session information includes a destination node identifier associated with the destination node. In the Huawei CloudLink Calling System, for example, the caller's mobile telephone and the geographically situated Huawei CloudLink-enabled Calling servers communicate to establish the call session information using the destination node identifier associated with the destination node.</p> <p>Individually or in combination with other information, the Huawei CloudLink-enabled server infrastructure using the CloudLink server software application to obtain the information requesting the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call and/or the information requesting the Huawei CloudLink-enabled Calling servers to provide access to exchange a message or setup and initiate a CloudLink call, wherein the request(s) for access identify a user name, email address, telephone number, and/or a device identifier associated with the called destination node, are examples of receiving from the mobile telephone an access code request message including a destination node identifier associated with the destination node as set forth in this element.</p>
	[51a-3] a location identifier identifying a geographical location of the wireless device;	<p>The Huawei CloudLink Calling System receives from the wireless device an access code request message, where the access code request message includes a location identifier identifying a geographical location of the wireless device. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure performs this element using the CloudLink server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the CloudLink client software applications.</p>

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		<p>In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to receive (or cause to be received) the parts, portions, and/or combinations of information associated with the access code request message as set forth in element [51a-1].</p> <p>In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to obtain (or cause to be obtained) the parts, portions, and/or combinations of information associated with the access code request message using the communications and/or combination of communications associated with the callee's mobile telephone interacting with one or more access servers and/or a combination of access servers associated with the Huawei CloudLink-enabled server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone interacting with one or more of the Huawei DNS servers. For example, the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone as information requesting the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call. In the Huawei CloudLink Calling System, for example, the information requesting the Huawei DNS servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei CloudLink Calling System, for example,
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the packets communicated from (or caused to be communicate by) the callee's mobile telephone interacting with the Huawei DNS servers comprise one or more DNS queries that query the Huawei DNS servers for one or more IP network addresses associated with one or more of the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure obtains at least one DNS query asking the Huawei DNS servers for the IP network addresses associated with the Huawei CloudLink-enabled Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure obtains at least one DNS query using one or more domain names associated with the Huawei CloudLink-enabled server infrastructure to obtain the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. The Huawei DNS servers use the one or more IP network addresses directly and/or indirectly associated with the caller's mobile telephone as a location identifier identifying a geographical location of the wireless apparatus.

- In one or more communications and/or a combination of communications associated with receiving from the wireless device an access code request message, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to obtain (or cause to be obtained) the communications and/or combination of communications associated with the callee's mobile telephone interacting with one or more of the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers provide access to the CloudLink server software applications developed by the Huawei enterprise customer to exchange messages (including chats, group chats, images, videos, voice messages and files) and make CloudLink calls (voice and video). In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers obtain the communications and/or combination of

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		<p>communications associated with the callee's mobile telephone as information requesting the Huawei CloudLink-enabled Calling servers to provide access to exchange a message or setup and initiate a CloudLink call. In the Huawei CloudLink Calling System, for example, the information requesting the Huawei CloudLink-enabled Calling servers to provide access includes and/or is communicated using one or more packets produced (or caused to be produced) by the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the callee's mobile telephone interacting with the Huawei CloudLink-enabled Calling servers comprise information asking one or more geographically situated Huawei CloudLink-enabled Calling servers for call session information. In the Huawei CloudLink Calling System, for example, the caller's mobile telephone and the geographically situated Huawei CloudLink-enabled Calling servers communicate to establish the call session information using the location identifier identifying a geographical location of the wireless device. The Huawei CloudLink-enabled Calling servers use the one or more IP network addresses directly and/or indirectly associated with the caller's mobile telephone and/or a current or pre-associated location information associated with the caller's mobile telephone as a location identifier identifying a geographical location of the wireless apparatus. The IP network addresses directly and/or indirectly associated with the caller's mobile telephone identify a location associated with the caller's mobile telephone, for example, as one or more absolute and relative locations:</p> <ul style="list-style-type: none"> • an actual geographic location associated with the caller's mobile telephone, which is identified by an IP network address assigned to the caller's mobile telephone by a service provider, such as a wireless carrier or Internet Service Provider (ISP); • an actual geographic location associated with the caller's mobile telephone, which is identified by an IP network address assigned to a router by a service provider, such as a wireless carrier or ISP, and
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		<p>through which the caller's mobile telephone directly or indirectly communicates with the Huawei CloudLink-enabled server infrastructure;</p> <ul style="list-style-type: none"> • an actual geographic location associated with the caller's mobile telephone, which is identified by an IP network address assigned to a proxy server by a service provider independent of the Huawei CloudLink-enabled server infrastructure, such as a wireless carrier or ISP, and which is physically located at an office/data center owned or leased by the service provider or a customer of the service provider and through which the caller's mobile telephone directly or indirectly communicates with the Huawei CloudLink-enabled server infrastructure; • a relative geographic location associated with the caller's mobile telephone, which is identified using a location physically or logically relative to the Huawei CloudLink-enabled server infrastructure by an IP network address assigned by a service provider independent of the Huawei CloudLink-enabled server infrastructure to the caller's mobile telephone, a router through which the caller's mobile telephone communicates with the Huawei CloudLink-enabled server infrastructure, or a proxy server through which the caller's mobile telephone communicates with the Huawei CloudLink-enabled server infrastructure; • a proximate location associated with the caller's mobile telephone, which is identified using a location physically or logically approximate to the Huawei CloudLink-enabled server infrastructure by an IP network address assigned by a service provider independent of the Huawei CloudLink-enabled server infrastructure to the caller's mobile telephone, a router through which the caller's mobile telephone communicates with the Huawei CloudLink-enabled server infrastructure, or a proxy server through which the caller's mobile telephone communicates with the Huawei CloudLink-enabled server infrastructure. <p>The current or pre-associated location information associated with the caller's mobile telephone identify a location associated with the caller's mobile telephone, such as one or more absolute and relative locations as:</p>
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		<ul style="list-style-type: none"> • a physical location, such as a street address, latitude/longitude, and GPS coordinates. • a logical or virtual location, such as a communications network, Internet Service Provider, Wireless Service Provider, and Wireless Carrier. <p>Individually or in combination with other information, the Huawei CloudLink-enabled server infrastructure using the CloudLink server software application to obtain the information requesting the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call and/or the information requesting the Huawei CloudLink-enabled Calling servers to provide access to exchange a message or setup and initiate a CloudLink call, for example, where the Huawei CloudLink Calling System receives one or more IP network addresses identifying the mobile telephone's geographical location and/or receives location information associated with the caller's wireless device (e.g., a mobile telephone) , are examples of receiving from the wireless device an access code request message including a location identifier identifying a geographical location of the wireless device as set forth in this element.</p>
	[51b-1] in response to receiving the access code request message, causing a routing controller to produce an access code identifying a communications channel on a gateway through which communications between the	The Huawei CloudLink Calling System, in response to receiving the access code request message, causes a routing controller to produce an access code identifying a communications channel on a gateway through which communications between the wireless device and the destination node can be conducted. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure performs this element using the CloudLink server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the CloudLink client software applications. The identification of a

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<p>wireless device and the destination node can be conducted,</p>	<p>communication channel on a gateway is performed by a routing controller of the Huawei CloudLink Calling System.</p> <p>In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to obtain (or cause to be obtained) an access code request message as set forth in element [51a et seq]. In response to the access code request message, for example, in the Huawei CloudLink Calling System, the Huawei CloudLink-enabled server infrastructure produces an access code reply message using the parts, portions, and/or combinations of information associated with the access code request message communicated from (or caused to be communicate by) the callee's mobile telephone. The Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to produce (or cause to be produced) one or more parts, portions, and/or combinations of information associated with the access code reply message, such as an access code. In the Huawei CloudLink Calling System, for example, the access code includes one or more parts, portions, and/or combinations of information. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to produce (or cause to be produced) the parts, portions, and/or combinations of information associated with the access code reply message (and the access code) using one or more access servers and/or a combination of access servers associated with the Huawei CloudLink-enabled server infrastructure:</p> <ul style="list-style-type: none"> • In one or more operations associated with causing a routing controller to produce an access code, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-
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	<p>enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce (or cause to be produced) information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call. In the Huawei CloudLink Calling System, for example, the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with Huawei CloudLink-enabled Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated Huawei CloudLink-enabled Calling servers using one or more domain names associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more Huawei CloudLink-enabled Calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers). The Huawei DNS servers, for example, identify the geographically situated Huawei CloudLink-enabled Calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile</p>
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		<p>telephone. Additionally, the Huawei DNS servers, for example, identify the geographically situated Huawei CloudLink-enabled Calling servers to the caller's mobile telephone as providing access to one or more communications channels on a gateway (or, alternatively, the geographically situated Huawei Calling servers incorporating such a gateway) through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers).</p> <ul style="list-style-type: none">• In one or more operations associated with causing a routing controller to produce an access code, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the geographically situated Huawei CloudLink-enabled Calling servers identified by the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers provide access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make CloudLink calls (voice and video). In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers produce (or caused to be produced) call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make CloudLink calls. In the Huawei CloudLink Calling System, for example, the call session information produced by the Huawei CloudLink-enabled Calling servers to provide access to exchange messages and make CloudLink calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei CloudLink-enabled Calling servers include call session information associated with the Huawei CloudLink-enabled Calling servers in response to a request for call session information associated with the caller's mobile
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telephone. In the Huawei CloudLink Calling System, the call session information associated with the Huawei CloudLink-enabled Calling servers includes the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers produce the call session information to identify, to the caller's mobile telephone, the Huawei CloudLink-enabled Calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, access to one or more communications channels on a gateway (or, alternatively, on a gateway incorporated within the geographically situated Huawei Calling servers) through which communications between the caller's mobile telephone and the destination node can be conducted.

Individually or in combination with other information, the Huawei CloudLink-enabled server infrastructure using the CloudLink server software application to produce the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call and/or to communicate the call session information produced by the Huawei CloudLink-enabled Calling servers to provide access to exchange a message or setup and initiate a CloudLink call, wherein a routing controller of the Huawei CloudLink Calling system identifies a communication channel on a gateway, are examples of causing a routing controller to produce an access code

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		identifying a communications channel on a gateway through which communications between the wireless device and the destination node can be conducted as set forth in this element.
	[51b-2] the access code being based on the location identifier of the access code request message received from the wireless device,	<p>The Huawei CloudLink Calling System, in response to receiving the access code request message, causes a routing controller to produce an access code being based on the location identifier of the access code request message received from the wireless device. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure performs this element using the CloudLink server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the CloudLink client software applications.</p> <p>In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to produce (or cause to be produced) one or more parts, portions, and/or combinations of information associated with the access code reply message, such as an access code as set forth in element [51b-1]. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to produce (or cause to be produced) the parts, portions, and/or combinations of information associated with the access code reply message (and the access code) using one or more access servers and/or a combination of access servers associated with the Huawei CloudLink-enabled server infrastructure:</p> <ul style="list-style-type: none"> • In one or more operations associated with causing a routing controller to produce an access code, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers provide access to the communication

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	<p>networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce (or cause to be produced) information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call. In the Huawei CloudLink Calling System, for example, the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with Huawei CloudLink-enabled Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated Huawei CloudLink-enabled Calling servers using one or more domain names associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more Huawei CloudLink-enabled Calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers). The Huawei DNS servers, for example, identify the geographically situated Huawei CloudLink-enabled Calling servers to the</p>
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	<p>caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the Huawei DNS servers, for example, identify the geographically situated Huawei CloudLink-enabled Calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers).</p> <ul style="list-style-type: none">• In one or more operations associated with causing a routing controller to produce an access code, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the geographically situated Huawei CloudLink-enabled Calling servers identified by the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers provide access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make CloudLink calls (voice and video). In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers produce (or caused to be produced) call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make CloudLink calls. In the Huawei CloudLink Calling System, for example, the call session information produced by the Huawei CloudLink-enabled Calling servers to provide access to exchange messages and make CloudLink calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei CloudLink-enabled Calling servers include call session information associated with the Huawei CloudLink-enabled Calling servers in response to a request for call session information associated with the caller's mobile
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telephone. In the Huawei CloudLink Calling System, the call session information associated with the Huawei CloudLink-enabled Calling servers includes the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers produce the call session information to identify, to the caller's mobile telephone, the Huawei CloudLink-enabled Calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.

Individually or in combination with other information, the Huawei CloudLink-enabled server infrastructure using the CloudLink server software application to produce the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call and/or to communicate the call session information produced by the Huawei CloudLink-enabled Calling servers to provide access to exchange a message or setup and initiate a CloudLink call, wherein the information produced to provide access to the Huawei CloudLink Callings System is based on a location associated with a calling wireless device (e.g., mobile telephone), are examples

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		of causing a routing controller to produce an access code being based on the location identifier of the access code request message received from the wireless device as set forth in this element.
	[51b-3] wherein the access code is useable by the wireless device to initiate communications with the destination node through the communications channel; and	<p>The Huawei CloudLink Calling System, in response to receiving the access code request message, causes a routing controller to produce an access code, wherein the access code is useable by the wireless device to initiate communications with the destination node through the communications channel. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure performs this element using the CloudLink server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the CloudLink client software applications.</p> <p>In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to produce (or cause to be produced) one or more parts, portions, and/or combinations of information associated with the access code reply message, such as an access code as set forth in element [51b-1]. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to produce (or cause to be produced) the parts, portions, and/or combinations of information associated with the access code reply message (and the access code) using one or more access servers and/or a combination of access servers associated with the Huawei CloudLink-enabled server infrastructure:</p> <ul style="list-style-type: none"> • In one or more operations associated with causing a routing controller to produce an access code, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers provide access to the communication

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	<p>networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce (or cause to be produced) information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call. In the Huawei CloudLink Calling System, for example, the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicated by) the Huawei DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with Huawei CloudLink-enabled Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated Huawei CloudLink-enabled Calling servers using one or more domain names associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more Huawei CloudLink-enabled Calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers). The Huawei DNS servers, for example, identify the geographically situated Huawei CloudLink-enabled Calling servers to the caller's mobile telephone based on the geographic</p>
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		<p>location associated with the caller's mobile telephone. Additionally, the Huawei DNS servers, for example, identify the geographically situated Huawei CloudLink-enabled Calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers).</p> <ul style="list-style-type: none">• In one or more operations associated with causing a routing controller to produce an access code, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to produce (or cause to be produced) one or more communications and/or a combination of communications associated with one or more of the geographically situated Huawei CloudLink-enabled Calling servers identified by the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers provide access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make CloudLink calls (voice and video). In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers produce (or caused to be produced) call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make CloudLink calls. In the Huawei CloudLink Calling System, for example, the call session information produced by the Huawei CloudLink-enabled Calling servers to provide access to exchange messages and make CloudLink calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei CloudLink-enabled Calling servers include call session information associated with the Huawei CloudLink-enabled Calling servers in response to a request for call session information associated with the caller's mobile
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telephone. In the Huawei CloudLink Calling System, the call session information associated with the Huawei CloudLink-enabled Calling servers includes the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers produce the call session information to identify, to the caller's mobile telephone, the Huawei CloudLink-enabled Calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.

Individually or in combination with other information, the Huawei CloudLink-enabled server infrastructure using the CloudLink server software application to communicate to the wireless device the information produced by the Huawei DNS servers as to which Huawei Calling servers are suitable to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call and/or to communicate call session information produced by the Huawei CloudLink-enabled Calling servers to the wireless device as to what servers can provide access to exchange a message or setup and initiate a CloudLink call, wherein the aforesaid information about access is useable by the wireless device to initiate such communications to the called destination, are examples of causing a routing controller to produce an

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		access code is useable by the wireless device to initiate communications with the destination node through the communications channel as set forth in this element.
	[51c-1] transmitting, to the wireless device, an access code reply message	<p>The Huawei CloudLink Calling System transmits, to the wireless device, an access code reply message. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure performs this element using the CloudLink server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the CloudLink client software applications.</p> <p>In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to obtain (or cause to be obtained) the access code request message associated with the caller's mobile telephone as set forth in elements [51a et seq]. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to produce (or cause to be produced) the access code as set forth in elements [51b et seq]. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to communicate (or cause to be communicated) to the caller's mobile telephone one or more parts, portions, and/or combinations of information associated with an access code reply message. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to communicate (or cause to be communicated) the parts, portions, and/or combinations of information associated with the access code reply message using one or more direct and/or indirect communications and/or combination of communications to the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to communicate (or cause to be communicated) the parts, portions, and/or combinations</p>

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		<p>of information associated with an access code reply message using one or more direct and/or indirect communications and/or combination of communications associated with one or more access servers and/or a combination of access servers associated with the Huawei CloudLink-enabled server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers communicate information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call. In the Huawei CloudLink Calling System, for example, the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with Huawei Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce at least one DNS reply that
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		<p>identifies the IP network addresses associated with one or more geographically situated Huawei CloudLink-enabled Calling servers using one or more domain names associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more Huawei CloudLink-enabled Calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers). The Huawei DNS servers, for example, identify the geographically situated Huawei CloudLink-enabled Calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the Huawei DNS servers, for example, identify the geographically situated Huawei CloudLink-enabled Calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers).</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to communicate (or cause to be communicated) communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers provides access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make CloudLink calls (voice and video). In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers communicate call session information associated with the communications and/or the combination of communications to provide access to exchange
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messages and make CloudLink calls. In the Huawei CloudLink Calling System, for example, the call session information produced by the Huawei CloudLink-enabled Calling servers to provide access to exchange messages and make CloudLink calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei CloudLink-enabled Calling servers include call session information associated with the Huawei CloudLink-enabled Calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei CloudLink Calling System, the call session information associated with the Huawei CloudLink-enabled Calling servers includes the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers produce the call session information to identify, to the caller's mobile telephone, the Huawei CloudLink-enabled Calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.

Individually or in combination with other information, the Huawei CloudLink-enabled server infrastructure using the CloudLink server software application to communicate to the wireless device the information

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		<p>produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call and/or to communicate to the wireless device the call session information produced by the Huawei CloudLink-enabled Calling servers to provide access to exchanging a message or setting up and initiating a CloudLink call, are examples of transmitting an access code reply message as set forth in this element.</p>
	<p>[51c-2] including the access code based on the location identifier,</p>	<p>The Huawei CloudLink Calling System transmits, to the wireless device, an access code reply message, where the access code reply message includes the access code based on the location identifier. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure performs this element using the CloudLink server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the CloudLink client software applications.</p> <p>In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to communicate (or cause to be communicated) the access code reply message as set forth in element [51c-1]. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to communicate (or cause to be communicated) the parts, portions, and/or combinations of information associated with an access code reply message using one or more direct and/or indirect communications and/or combination of communications associated with one or more access servers and/or a combination of access servers associated with the Huawei CloudLink-enabled server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Huawei CloudLink-enabled server infrastructure uses the

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	<p>CloudLink server software application to communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers communicate information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call. In the Huawei CloudLink Calling System, for example, the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with Huawei CloudLink-enabled Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated Huawei CloudLink-enabled Calling servers using one or more domain names associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more Huawei CloudLink-enabled Calling servers that are</p>
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		<p>geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers). The Huawei DNS servers, for example, identify the geographically situated Huawei CloudLink-enabled Calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the Huawei DNS servers, for example, identify the geographically situated Huawei CloudLink-enabled Calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers).</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to communicate (or cause to be communicated) communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers provides access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make CloudLink calls (voice and video). In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers communicate call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make CloudLink calls. In the Huawei CloudLink Calling System, for example, the call session information produced by the Huawei CloudLink-enabled Calling servers to provide access to exchange messages and make CloudLink calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be
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communicate by) the Huawei CloudLink-enabled Calling servers include call session information associated with the Huawei CloudLink-enabled Calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei CloudLink Calling System, the call session information associated with the Huawei CloudLink-enabled Calling servers includes the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers produce the call session information to identify, to the caller's mobile telephone, the Huawei CloudLink-enabled Calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.

Individually or in combination with other information, the Huawei CloudLink-enabled server infrastructure using the CloudLink server software application to communicate to the wireless device the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call and/or to communicate to the wireless device the call session information produced by the Huawei CloudLink-enabled Calling servers to provide access to exchange a message or setup and initiate a CloudLink call, wherein the information produced to provide

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		access to the Huawei CloudLink Callings System is based on a location associated with the wireless device, are examples of transmitting an access code reply message including the access code based on the location identifier as set forth in this element.
	[51c-3] to cause the wireless device to use the access code to initiate communications with the destination node through the communications channel.	<p>The Huawei CloudLink Calling System transmits, to the wireless device, an access code reply message to cause the wireless device to use the access code to initiate communications with the destination node through the communications channel. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure performs this element using the CloudLink server software application to provide handling, routing, and delivery of non-real time (e.g., messages) and real time (e.g., voice and video calls) communication to and from supported devices using the CloudLink client software applications.</p> <p>In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to communicate (or cause to be communicated) the access code reply message as set forth in element [51c-1]. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to communicate (or cause to be communicated) the parts, portions, and/or combinations of information associated with an access code reply message using one or more direct and/or indirect communications and/or combination of communications associated with one or more access servers and/or a combination of access servers associated with the Huawei CloudLink-enabled server infrastructure:</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the Huawei DNS

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	<p>servers provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers communicate information associated with the communications and/or the combination of communications to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call. In the Huawei CloudLink Calling System, for example, the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei DNS servers. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei DNS servers include one or more DNS replies that respond to the DNS queries associated with the caller's mobile telephone with one or more IP network addresses associated with Huawei CloudLink-enabled Calling servers geographically situated relative to the caller's mobile telephone based on the location of the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce at least one DNS reply that identifies the IP network addresses associated with one or more geographically situated Huawei CloudLink-enabled Calling servers using one or more domain names associated with the Huawei CloudLink-enabled server infrastructure. In the Huawei CloudLink Calling System, for example, the Huawei DNS servers produce at least one DNS reply identifying, to the caller's mobile telephone, one or more Huawei CloudLink-enabled Calling servers that are geographically situated with respect to the caller's mobile telephone (via identifying the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers). The Huawei DNS servers, for example, identify the geographically situated Huawei CloudLink-</p>
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		<p>enabled Calling servers to the caller's mobile telephone based on the geographic location associated with the caller's mobile telephone. Additionally, the Huawei DNS servers, for example, identify the geographically situated Huawei CloudLink-enabled Calling servers to the caller's mobile telephone as having one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted (via identifying the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers).</p> <ul style="list-style-type: none"> • In one or more communications and/or a combination of communications associated with transmitting an access code reply message, the Huawei CloudLink-enabled server infrastructure uses the CloudLink server software application to communicate (or cause to be communicated) communicate (or cause to be communicated) the communications and/or the combination of communications associated with one or more of the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers provides access to exchange messages (including chats, group chats, images, videos, voice messages and files) and make CloudLink calls (voice and video). In the Huawei CloudLink Calling System, for example, the Huawei CloudLink-enabled Calling servers communicate call session information associated with the communications and/or the combination of communications to provide access to exchange messages and make CloudLink calls. In the Huawei CloudLink Calling System, for example, the call session information produced by the Huawei CloudLink-enabled Calling servers to provide access to exchange messages and make CloudLink calls includes and/or is communicated using one or more packets produced (or caused to be produced) by the Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the packets communicated from (or caused to be communicate by) the Huawei CloudLink-enabled Calling servers include call session information associated with the Huawei CloudLink-enabled Calling servers in response to a request for call session information associated with the caller's mobile telephone. In the Huawei CloudLink Calling
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System, the call session information associated with the Huawei CloudLink-enabled Calling servers includes the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers produce the call session information to identify, to the caller's mobile telephone, the Huawei CloudLink-enabled Calling servers as geographically situated with respect to the caller's mobile telephone using the IP network addresses associated with the geographically situated Huawei CloudLink-enabled Calling servers. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers produce the call session information based on the geographic location associated with the caller's mobile telephone. In the Huawei CloudLink Calling System, for example, the geographically situated Huawei CloudLink-enabled Calling servers, additionally, produce the call session information to identify, to the caller's mobile telephone, one or more communications channels through which communications between the caller's mobile telephone and the destination node can be conducted.

Individually or in combination with other information, the Huawei CloudLink-enabled server infrastructure using the CloudLink server software application to communicate the information produced by the Huawei DNS servers to provide access to the communication networks, the servers, the services, and/or the other resources associated with the Huawei CloudLink-enabled server infrastructure to exchange a message or setup and initiate a CloudLink call and/or to communicate the call session information produced by the Huawei CloudLink-enabled Calling servers to provide access to exchange a message or setup and initiate a CloudLink call, wherein the information regarding access causes the wireless device to initiate communications through the Huawei CloudLink Calling system, are examples of transmitting an access code reply message to cause the wireless device to use the access code to initiate communications with the destination node through the communications channel as set forth in this element.

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		<p>The Huawei CloudLink Calling System enables establishing communications between a wireless device and a destination node of a communications network as described in the '721 Patent and defined in claim 51, literally and/or under the doctrine of equivalents. The Huawei CloudLink Calling System uses access code request/response messages to produce an access code identifying a communications channel on a gateway through which communications between the wireless apparatus and the destination node can be conducted. In the Huawei CloudLink Calling System, the access code is based on a geographical location of the wireless apparatus. The access code, alone or in combination with other information for example, identifies an IP address associated with one or more CloudLink calling servers having a communication channel through which the caller's mobile telephone may initiate a CloudLink call. In the Huawei CloudLink Calling System, an access code comprises information or a combination of information, such as one or IP addresses associated with one or more CloudLink calling servers (having communication channels for CloudLink calls between mobile telephones) and/or call session information provided by the CloudLink calling servers that enables a call to be made to a callee. The communications channels also can connect the caller's mobile telephone with other devices using telephone lines in a Public Switched Telephone Network (PSTN). The CloudLink calling servers can direct calls that are received on the communications channels to a gateway leading to the PSTN. The CloudLink calling servers use the communications channels to cooperate with an IP network and the gateway to the PSTN to cause a call involving the caller's mobile telephone to be routed through the IP network and continue to the PSTN. The communication channels provided by the CloudLink calling servers provide the benefit of a free or lower cost calling area associated with the caller's mobile telephone, both over the IP network and the PSTN. Furthermore, calls may be placed by callers to the IP network within the local calling area so as to minimize transmission times over the IP network.</p>
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APPENDIX A

In the Huawei CloudLink Calling System, Huawei purposefully caused or encouraged infringement using Huawei CloudLink to produce an access code based on a location identifier and/or based on a location pre-associated with a mobile telephone and which is used by the Huawei CloudLink-enabled server infrastructure to initiate a call as described in the ‘721 Patent and defined in the asserted claims, literally and/or using the doctrine of equivalents.

In the Huawei CloudLink Calling System, for example, Huawei actively encourages and enables users of Huawei CloudLink on the Huawei website through one or more electronic storefronts to purchase and use Huawei CloudLink. Huawei actively encourages and enables users of Huawei CloudLink on the Huawei website through one or more support articles to configure and use Huawei CloudLink in the US. Huawei actively encourages and enables users of Huawei CloudLink through one or more support articles to configure and use Huawei devices to make calls between public and private networks, between headquarters and branch offices, even across enterprises as described in the ‘721 Patent and defined in the asserted claims, literally and/or using the doctrine of equivalents.

A=Intentional Encouragement - Specific Instructions On How To Use Accused Feature



B=Purposeful Causation -Pre-installed Applications That Will Cause Some Users To Infringe

	Category	Third-Party	Description/URL
1.	A,B	Enterprise users	<p>Title: Huawei CloudLink Video Conferencing Platform</p> <p>The Huawei CloudLink Video Conferencing Platform — incorporating multi-architecture computing, converged media types, and open data — provides customers with built-in video applications, a video sharing platform, and easy enablement services. In sum, the platform brings about a digital revolution to working environments.</p>

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			With 4K Ultra-High-Definition (UHD) video and audio, the dedicated video conferencing platform supercharges intelligence, capacity, security, reliability, and Operations and Maintenance (O&M). It efficiently connects a wide range of scenarios — thanks to fully converged architecture — delivering a high-end, supercharged video conferencing experience for users.
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			<div><p>SMC Video Conferencing Service Management System</p><p>Huawei Service Management Center (SMC) is a next-generation video conferencing management system. It supports easy-to-use conference management and control, visualized O&M, and unified scheduling and management of video conference devices and media resources on the entire network. Its service-oriented architecture features high performance, large capacity, and elastic scaling, meeting the needs of video conferences at different scales.</p></div> <div><p>SwitchCenter Call Control and Firewall Traversal Server</p><p>An H.323- and SIP-compliant server that supports call control and traversal between public and private networks. It enables seamless video collaboration between private and public networks, headquarters and branches, even across enterprises.</p></div> <div><p>https://e.huawei.com/en/solutions/enterprise-collaboration/videoconferencing-platform</p></div>
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